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Wyoming in pictures and prose.





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# WYOMING

## IN PICTURE AND PROSE

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# WYOMING

## The Undeveloped Empire on the Continental Divide.

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**G**EOGRAPHICALLY, Wyoming is classed as one of the States of the inter-mountain or arid region, and has as its neighbors the greatest mining and agricultural states of the West. It was admitted as a State July 10th, 1890, being the forty-fourth State in order of admission. Its length from east to west is 355 miles, and width from north to south, 276 miles. Its area is 97,890 square miles, or 62,645,120 acres.

In general appearance the country is mountainous, with valleys, rolling plains and plateaus, the latter covered with grasses of great nutrition and furnishing admirable pasture for live stock, while the mean elevation is 6,000 feet above sea level, with extremes ranging from 3,000 to 14,000 feet. Probably 10,000,000 acres of the total area of the State are timbered.

Flowing east or west, according as their sources are on the eastern or western slope of the main range of the Rocky Mountains, which cross the State from north to south, are numerous streams, among the number being the North Platte, Snake River, Green River, the Big Horn, the Shoshone, the Laramie and the Yellowstone. None of these streams are navigable in a commercial sense, but they furnish water for the irrigation and development of the surrounding country, and are used for the transportation of timber.

The soil is a light, sandy loam; rich and dark in the valleys. When it is reclaimed by the application of water, bountiful returns of agricul-

tural products, with the exception of such as thrive only at low altitudes and in warm, damp climates, are secured. It is estimated that 10,000,000 acres of the area of the State are suitable for agricultural purposes, if irrigated.

There are thirteen counties, four judicial districts, four irrigation divisions and many school districts. The capital is located at Cheyenne, in the southeastern corner of the State.

Wyoming offers today the greatest opportunities for active development of undeveloped natural resources of any of the great Western states. Its resources are many and diversified, and no man can say what is the future of this empire of possibilities. There are enormous areas as yet untouched, and the advent of active settlers is all that is necessary to place these dormant resources prominently before the commercial world. Railroads are being built to the hitherto inaccessible points of the State, others are being projected, and Opportunity stands awaiting the right man. We need more capital invested on a business basis and more men of brains, push and honest purpose. To such Fortune stands upon the Continental Divide, with winning smile and out-stretched arms; to such Wyoming extends a hearty greeting and a co-operative hand. The door of opportunity is open to young and energetic men.

# COME TO WYOMING.

1899



# Wyoming Has the Water Essential for Irrigation.



Piney Creek, Johnson County, one of the Many Beautiful and Useful Wyoming Streams.

# AGRICULTURE IN WYOMING

UPON the agriculture of a region must its continued and permanent prosperity depend. Poor indeed is any country which has no staple form of agricultural industry, and the more varied are its farming interests, the greater is the independence, the industrial and financial success of its people. The conditions in Wyoming are so varied that it is difficult to classify them. As a whole the state is located in the heart of the mountain and plateau portion of the arid region. The average altitude of our agricultural land is about 6,000 feet above the sea. There are extensive and well watered plateaus between 7,000 and 8,000 feet which offer especial advantages for the kind of agriculture suited to them, and there are probably larger areas of irrigable land below 5,000 feet altitude than are found in any other portion of the West. The mean annual temperature varies from about 40° F. to 50° F., depending on the altitude and the protection of surrounding mountains. The growing season, free from frost, ranges from less than eighty days to more than 150 days. The annual rainfall may exceed thirty inches in the higher mountain ranges, is seventeen inches to twenty-one inches in the northeast corner of the state, and perhaps not more than four inches on the driest interior region, known as the Red Desert. The average annual precipitation is about twelve inches for the farming sections of the state, and its distribution through the year is most favorable to the growth of crops, as 40 per cent to 50 per cent of the total falls in the spring months, which secures the germination of seeds and supplies the early growth of plants before irrigation becomes necessary.

As a whole the soils of the state are wonderfully fertile, as they have not been subject to leaching by heavy rainfall and contain all the plant food which was in the original rocks from which they are formed. Phenomenal yields are obtained on these virgin soils, and maintaining their fertility is simply a question of farm practice and rotation. It is neither necessary nor advisable to use expensive commercial fertilizers.

The health factor in the climate cannot be excelled for man, animals and plants. The high quality of Wyoming stock and crops has received flattering recognition and tribute at every international exposition, and at local, state and national fairs. In 1904, at the Louisiana Purchase Exposition, Wyoming received more grand prizes and gold medals for her agricultural crops for her size in population than any other state, and at the 1904 International Stock Show at Chicago, with a single exception, Wyoming captured every prize for the northwest district.

DEVELOPMENT—There are few who can appreciate the newness of the western agriculture and its bearing on our development. Farm prac-

tices and other human institutions which have been worked out through a hundred or a thousand years in the pluvial districts have been brought into arid America and made general use of, regardless of the fact that they were not suited to conditions of climate, soil and social relationships so absolutely different from those in which they had become established. Regardless of this fact, our agriculture has been successful from the first, in that it sustains a people of continuing and increasing prosperity. Thanks to the favoring factors of rich soils and salubrious climate, agriculture has been profitable in spite of lack of information and mistakes in methods, crops and laws.

Our knowledge of so complex a business as agriculture is, of necessity, cumulative, and with the simple and slight beginning already made and the resulting success, the immediate future promises vastly more than can be stated or realized.

Our first agriculture was the grazing of stock, and so remunerative was the grazing industry that Wyoming became famous for her grass-fed cattle, her range horses and her sheep and wool. With the passing of the open range and the establishment of ranches where increased amounts of hay and forage can be grown, the stock industry is steadily increasing, and there has been rapid improvement in the class of animals produced.

But it is in the cultivation of the soil, both for the production of supplemental stock food and of salable crops, that our agriculture has developed most rapidly within the past ten years. No other industry has kept pace with this in growth and no other class of citizens have so much to show for their ten years' labor. Ranchmen are prosperous and are building homes worthy the name. With new insight into our farming and the new internal improvements which are now under way in the state, the present cheap lands under irrigation must materially advance in valuation, and new crops and new markets insure more rapid improvement in the future. In the language of the Secretary of Agriculture, there are no bad acres in this state. All are useful for some purpose, and with good management our irrigated lands can all be made to pay 10 per cent or better on a valuation of \$100 per acre. The next ten years will be marked by unusual activity in reclamation through irrigation, as well as extension of dry farming, which will double and treble both our population and our land values.

Several factors make our farming highly profitable. Some of these are, large areas of free public land, good water supply which can be cheaply applied to the land, large home market at high prices for home-



## A Typical Wyoming Ranch on a Small Stream.



View of Irrigated Ranch on Red Canon Creek, near Lander, Fremont County. Altitude, 5,400 Feet.

This is a fine example of the small ranch which serves as a headquarters and feeding center for a profitable stock enterprise. Hay and grain are raised under ditches and the stock ranged on the surrounding hills and mountains.

grown products, unexcelled quality of both crops and flesh, which demand the best prices wherever they may be marketed, large yields from virgin arid soils and quick returns from crops and stock.

**HIGH ALTITUDE FARMING**—Perhaps no parts of our state are better adapted to the production of live stock than our extensive high plateaus. The rich native grasses reach perfection of growth on these higher lands and are more abundant and varied than on lower areas where the seasons are longer. We find our short season hay is unusually rich in the flesh-forming element, nitrogen, and with their quick growth, grasses produce less woody fibre and are more digestible when fed to live stock than are grasses that take a longer time to mature. Because of the short seasons and a general lack of understanding about the possibilities of perfecting crops under these conditions, the development of general farming has been slow, even though at least one of the first large irrigating canals to be constructed was the Pioneer Canal, on the Laramie Plains, covering excellent lands a little more than 7,000 feet above sea level. In 1891 the Agricultural Experiment Station was established at Laramie, and the possibility of remunerative cropping has been fully demonstrated. Crops suitable to the season produce large yields, and the problems are no more difficult to meet than those in any farming district. Alfalfa is now a successful staple crop up to 7,500 feet altitude. Early varieties of potatoes and other root crops, oats, barley, rye, wheat, spelts, flax, buckwheat, peas and other things are certain crops, and mixed farming is becoming established. There are still many opportunities to obtain cheap lands in these regions, which can be made to pay for themselves with a single crop. The station records show average yields of wheat, including all varieties tried, of over twenty-five bushels per acre for a period of ten years. Some maximum yields of other crops are, potatoes, 522 bushels per acre; alfalfa, 4¼ tons; onions, 38,920 pounds; spelts, 72 bushels; barley and oats, more than 80 bushels, and many other things have given large maximum yields and good average returns. Three years' experiments to determine the cost and profit of growing wheat show an average net profit of more than \$10 per acre, where done on a small scale at comparatively large expense.

**STOCK FEEDING**—Within the past few years there has been a large increase in the business of feeding stock at home to prepare them for the eastern market. For a number of years Wyoming hay-fed steers have been sold for the block, and in many instances this beef has gone to consumers as corn-fed. At the 1904 International Stock Show, in Chicago, Mr. E. J. Bell of Laramie took second prize on a carload of grass-fed cattle which were in competition with the best corn-fed beef that could be produced in the corn belt of the east. The Experiment Station introduced the field pea as food for fattening lambs, and the business of fitting lambs for market on peas promises to become one of the most

extensive and best paying stock industries of the state. It has been found, also, that combination rations of barley and alfalfa, of flax seed and alfalfa, with turnips or other roots, produce cheaper grains than corn. Stock feeding will be one of the most remunerative and staple occupations of our farmers.

**LOW ALTITUDE FARMING**—Little may be said about the possibilities of farming under irrigation where the altitude is less than 6,000 feet. Some world-renowned crops have been authenticated, such as the prize yield of potatoes of 974 bushels and 48 pounds per acre, produced by Mr. Sturgis in Johnson County; a yield of 132 bushels of oats produced in Sheridan County; an average of 8½ tons of alfalfa hay per acre for three years produced on the Wheatland Experiment Farm.

Large areas are being reclaimed in Eastern Wyoming and in the western and northern portions of the state, where the lands lie from 3,500 to 5,000 feet above the sea. Many of these lands are so well protected by surrounding ranges of mountains that crops can be grown which would be too tender for other places of like latitude. These lands and water rights under the new reclamation projects are cheap and cannot fail to greatly increase in value within a short time.

**HORTICULTURE**—The gardens of the state are beginning to furnish fresh vegetables for home use. As a general indication of what may be done, we need only cite the fact that at altitudes of 5,000 feet or less, peanuts, sweet potatoes, tomatoes and tobacco are successfully produced. Melons, pumpkins, squashes and other equally tender things grow to perfection at all save the high altitudes, and gardens up to 8,000 feet produce a good variety of vegetables of the best quality.

Among fruits, the hardier kinds are being grown in all parts of the state. On the Laramie Plains Jacob Lund has an orchard at an altitude of 7,400 feet which matures Wealthy apples each year. Currants, gooseberries, dewberries and strawberries can be grown anywhere that there are agricultural lands.

The horticultural sections of the state are the low altitude lands and the protected valleys of Laramie, Johnson, Sheridan, Fremont and Big Horn Counties. In Fremont and Big Horn Counties two different ranchmen have ripened peaches without other protection than that afforded by hills and tree windbreaks. In these counties a large variety of apples are bearing crops of first quality fruit. Among these varieties may be mentioned the Northwest Greening, Gano, Ben Davis, Walbridge, Wolf River, Ganitan, Yellow Transparent, McMahon, Wealthy, Duchess, Pewaukee, White Winter Pearmain, Gideon and others, as well as a large variety of crabs. Several varieties of pears, cherries and plums are yielding good crops. The possibilities of homemaking where such fruits and the more useful shade trees succeed will appeal to many.



One *of* the Great Northern Wyoming Valleys, the Grey Bull River.



Here is shown the whole process of the smaller irrigation methods. Note the ditch in foreground, diversion box at right, distributing ditch and irrigated field, with unbroken, raw land beside it. Note the seepage line, etc.  
Ranches and coal-bearing hills in the distance.

# Dry Farming.

IN the arid West where it has been considered that crops could only be raised by means of irrigation, we now find it possible to raise profitable crops where the rainfall is less than fifteen inches per annum, not under new methods, but by the oldest kind of farming, practiced since agriculture began, where but a scanty amount of moisture was furnished by the natural rainfall. For over forty years this kind of farming has been practiced in California, and for over twenty-five years in eastern Oregon and eastern Washington. In these states it has been demonstrated that by deep plowing and a proper system of cultivation, by summer fallowing and tilling one-half of the farm area without a crop each year, two years' moisture may be conserved for the biennial crop. In the early '80s, settlers in western Kansas and Nebraska attempted to farm under the usual methods and failed, on account of the lack of sufficient rainfall at the proper time.

There are many places in Wyoming along the eastern border and in the northeastern corner where farmers have been successfully farming under ordinary methods for nearly twenty years. While many of them have not failed to raise a profitable crop, yet this method of farming cannot be recommended; but the system which is hereafter outlined, if carefully followed, will assure a profit to the land owner.

Three years ago, a committee of citizens of Cheyenne raised funds for the purpose of conducting experiments and secured the co-operation of the United States Department of Agriculture and the establishment of an experiment farm near Cheyenne. The services of an experienced man were secured for the purpose of instructing farmers in this method of agriculture. Two seasons' work were carried out almost within the city limits, and in 1907 a yield of fifty-six bushels of beardless barley and thirty-eight and two-thirds bushels of Macaroni wheat were secured to the acre. Two tracts of alfalfa were started, and, at the present time, give promise of being a perfect success.

There are many fields in Wyoming in which alfalfa is being raised entirely without irrigation, and it is believed that one large crop can be secured, and, in case of a rain at the proper time, a second crop is possible.

Nearly one-half of the area of Wyoming is still open to settlement, and it is estimated that nearly twenty million acres could be brought under cultivation and made to produce profitable crops without artificial irrigation.

The record of precipitation, which has been kept for Laramie County since 1871, a period of thirty-six years, shows that the average rainfall is 13.58 inches, and the average for the past 16 years has been 15.66 inches, showing a considerable increase over the first twenty years for

which records were kept, and, what is more important, it is shown that three-fourths of this precipitation comes during the growing months, while in the far western states, where successful dry farming is an established fact, the precipitation comes in the winter and not when the growing crops need it most.

In Wyoming we are free from those scorching hot winds which prevail during the summer months over large parts of the states farther West, thus reducing the evaporation at a time when the moisture is most needed. This immense advantage in the distribution of our rainfall would indicate that we can be more successful than the dry farmers in California, Oregon, Idaho and Washington.

By discing the stubble ground after our crops are taken off we conserve and hold what moisture there is in the soil and prepare it to readily absorb the moisture that may fall later, and this enables us to plow our ground in the fall, which cannot be done where the dry season comes in the summer. It has been demonstrated at Cheyenne that proper cultivation does conserve the moisture and keeps the ground in condition to be worked.

The immense areas of the virgin soils of Wyoming have never been wet to a depth of two feet, on account of the packing of the surface by buffalo and live stock, but, after breaking up the ground the moisture goes into the sub-soil and is saved and accumulated. These arid soils are very rich in mineral plant foods, and have enough humus and nitrogen, when new, to supply large crops; the occasional growth of legumes, which gather nitrogen from the air, is all that is necessary to keep them perpetually fertile.

Prospective dry farmers should bear in mind that better results will be obtained if seeds suitable to the different altitudes are secured. At the higher altitudes short season crops can be made to mature with less moisture than they can where the season is longer and comparatively hot.

## THE SYSTEM RECOMMENDED.

The system recommended in Wyoming consists in holding two years' moisture for one big crop. The farmer should divide his land into two portions, one-half to be put in a crop each year, while the other is being summer fallowed. By this method, a good crop on one-half of the total amount of land is secured when the seasons are dry.

## PLOWING MUST BE DEEP.

In breaking the ground it should be done in the fall, if possible, in order that the winter's moisture may be conserved, the sod becoming decomposed and the soil compacted so that a good seed bed can be formed for spring planting. The old ground should be plowed eight to nine inches deep, and if not plowed in the fall, should be plowed as early in the spring as conditions permit.



## Wyoming Employs an Expert to Take Charge *of* its Dry Farm Experiments.



Beardless Barley on Model Dry Farm,  $1\frac{1}{2}$  Miles East of Cheyenne. Altitude, 6,000 Feet.

The services of the State Dry Farmer are at the disposal of any settler who will write for his advice, and bulletins may be had for the asking. Results are sure and certain under this system to the man who will work and give his crops due attention. Think about it and write to Dr. V. T. Cooke, Cheyenne, Wyo., for more information.



*The Model Dry Farm at Cheyenne is "Showing" the Skeptics.*



View of Model Dry Farm at Cheyenne, Laramie County Showing Unbroken Prairie and Crops of Barley and Sugar Beets.

The State of Wyoming is deeply and actively interested in the success of dry farming methods, and the view here shown is on the State Farm, at an altitude of 6,000 feet. These experiments are highly successful and there is every indication that this method of farming will become one of the great assets of the State.

*The Dry Farm is a Fact and Not Merely a Theory.*



Land Commissioner Fuller, Governor Brooks, Attorney General Mullen, State Geologist Beeler, and State Engineer Johnston, inspecting dry farm wheat near Cheyenne.

Three years ago in the Rocky Mountain West dry farming was a joke and a by-word. Today hundreds of thousands of acres are, or soon will be, under cultivation by this method; thousands of sturdy men are its devotees.



By harrowing the ground the same day the evaporation of a considerable amount of moisture is prevented. Harrowing and drilling should be diagonally or at right angles to the way in which the prevailing winds blow in order to prevent the soil from drifting, to hold the snow and to prevent the particles of soil or snow from injuring the young grain in the drill furrows by being carried along in the furrows by the wind. The ground being summer fallowed should be harrowed as soon as it is dry enough after every heavy rain or big snow. If harrowing is deferred too long, the surface of the soil becomes dry and is more liable to drift when cultivated. Some farmers recommend summer fallowing immediately after any rain or snow. The farmer must use his judgment and get on the ground as soon as conditions are favorable for doing good work.

#### SOIL MULCH CONSERVES MOISTURE.

It is by the soil mulch that moisture is conserved, evaporation prevented, and dew or other moisture in the air, or precipitation, is absorbed.

The summer fallowed ground should be in a granular form of small lumps, but care should be taken not to get it too fine. The object of cultivating is to prevent the formation of a crust, allow the proper action of the sun and air, and prevent the growth of weeds. The moisture of the soil rises to the surface and evaporates by capillary attraction, and by breaking the upper surface this loss of moisture is prevented.

#### SOWING THE CROP.

By sowing winter grain early, not later than the end of August, it will attain a good growth and be in better condition to resist the winter. Spring grain should be sown as soon as the ground can be put in good condition and the danger of hard freezing of the soil is passed. In dry farming better results are obtained by sowing not more than thirty to forty pounds of wheat per acre in the early fall. Other things being equal, the earlier the grain is sown the greater is its chance of stooling. If sown late in the spring a larger proportion of seed can be sown, as if the ground is moist and warm the grain starts and grows so rapidly that it does not take time to stool.

The Press Drill is essential for the dry farmer. Broadcasting by hand or machine causes many failures, as some of the grain is harrowed too deeply and some not deep enough. The press drill puts in the grain to the proper depth, pressing the soil around the seed, insuring moisture to cause it to germinate, and gains the farmer a week or ten days by putting the grain into moist ground at a uniform depth, besides the large saving of seed. With a press drill ten to twelve pounds of alfalfa seed per acre is sufficient.

You cannot afford to use any but the best seed obtainable. Seeds should be those raised without irrigation, if possible to obtain them, and should be thoroughly clean and free from weed seeds. The cost of such seeds is of little importance compared with the results.

#### CULTIVATION.

A soil mulch must be maintained, not only on the fallowed ground, where frequent harrowings will be all that is necessary, but also on the land which is raising the crop. In the spring use a weeder, or thoroughly harrow your winter grain. The harrow teeth must be sharp. Do not be afraid to harrow for fear of tearing out too much grain. It is very important that growing cereals should be cultivated with a harrow. Alfalfa and grass meadows should be thoroughly disced. After the second year there is little danger of injuring alfalfa with the disc, even though the surface soil is pulverized. Alfalfa permanently occupies the land, and discing and harrowing is the proper method of preserving the soil and moisture.

Potatoes, corn and other crops in rows should be harrowed until they get too large, and after that shallow level culture should be followed until the crop is harvested.

#### HARVESTING.

The soil should not be neglected; discing the stubble after harvesting the grain is important. The drag harrow should be used to break up the lumps and re-establish the soil mulch after harvesting potatoes or sugar beets.

Barley or other grains, cut for grain hay, without threshing, should be harvested when in the stiff dough. This prevents the reseeding of the ground through the dropping of the ripe grain, which would come up the next year as a voluntary crop.

#### PROPER CROPS TO RAISE.

Crops which are grown in rows, like potatoes and corn, will mature with the least of moisture. Corn cannot be raised in all sections of Wyoming, as the nights are too cool and the seasons too short, but profitable crops can be raised in many places, and only an experiment will decide.

Among the small grains, drouth resisting varieties should be planted. Macaroni or Durum wheat is the best. Polish wheat is good where it is to be used for stock feed.

Spelts or emmer is a most excellent stock feed.

The bald or hulless barley or the beardless brewing barley are short season crops, which will mature with a minimum amount of moisture and furnish excellent feed.

## Sagebrush to Oats—April to August.



It is an axiom that sagebrush land is good farm land, and the above crop proves it. The land here was broken in April, worked in the usual way, irrigated, and the result is told to any farmer by the stubble in the foreground and sheaves in the center. 80 bushels per acre and 44 pounds to the bushel is the usual crop. This showing comes from near Douglas, in the North Platte Valley, in Converse County.



Oats do well in all parts of Wyoming, the earlier varieties being best where moisture is scarce.

If it is desired to raise alfalfa, care should be taken to secure seed raised in the arid North, without irrigation, where the seasons are short.

The Sorghums make good crops where the season is sufficiently long and warm.

Brome grass is one of the best drouth resistant sorts for pasturage purposes, but it must be harrowed or disced to prevent its becoming sod-bound and to keep it producing.

An attempt is being made to develop white sweet clover and to so improve it that it will become valuable for dry farming and an important feed to be used with grain in fattening lambs and other stock.

French clover or Sainfoin is a hardy, drouth resistant clover at high altitudes.

The winter grains are especially favorable for dry farming, because the summer fallow method properly prepares the ground, and the spring rains are sufficient to mature the crop.

Winter rye is not appreciated as it should be, for it is one of the best feeds for hogs which can be produced.

Dr. V. T. Cooke, the expert dry farmer, says it has been estimated that the value of the stubble of an alfalfa crop and the roots contained in the upper 6½ inches of the soil is \$20 per acre from the fertility standpoint, while in addition to the stubble the whole root system contains as much fertility as could be added to the soil by an expenditure of \$35 for commercial fertilizers. At the Wyoming Experiment Station wheat following alfalfa yielded 30 bushels per acre, and when sown after other crops an average of 18 bushels per acre. Oats after alfalfa yielded 78 bushels per acre, and after other crops 37 bushels per acre.

#### MIXED FARMING.

Unless the dry farmer can make more than a living he will not be satisfied. Therefore, in order to receive the full result of his labor the farmer should have sufficient stock to consume all the forage raised upon his farm. The manure is an important item to be added to arid soils, as it increases their humus, making them more retentive of moisture and plant food. Where crops are fed to stock on the farm there is practically no loss to fertility.

Where grains are raised for stock feed, they should be cut early and fed in a bundle, which avoids the extra work and expense of threshing and hauling to market.

The feeding of lambs or mutton, cattle and hogs of the bacon type, will insure a profit. Hog cholera is unknown, and there is a ready sale in Wyoming for all the hogs raised.

#### SIZE OF FARM.

One man should be able to farm at least 160 acres if provided with proper equipment, by taking advantage of conditions as they arise. Four-horse implements enable one man to do double work. A man or boy with four horses and a three-section harrow can harrow thirty to thirty-five acres per day. It is possible that a small amount of extra help will be necessary at certain times.

#### EQUIPMENT.

Dry farming does not require any special or new equipment. The dry farmer should have four or six horses, a three-section drag harrow, two 12 or 14-inch gang plows and a disc harrow. Most of them are now being made with discs sixteen inches in diameter. It is recommended that the discs should not be larger than fourteen inches, as the small discs seem to do the best work; and an Acme harrow is valuable for maintaining soil mulch. One or more good cultivators are needed.

Several farmers could club together and buy a harvesting machine, as unless the farmer has a large farm he would not need its exclusive use.

The press drill is one of the essentials and may be either of the shoe or disc types. The disc drill has some advantages where there is much stubble or coarse manure on the ground, but on well prepared summer fallow ground, the shoe drill with press wheels following to firmly pack the soil around the seed does the best work. Where there are heavy clay soils, a double press wheel should be used.

If the soil bakes, the double press wheels will leave a crack in the center, directly over the seed, through which the germinating plantlets can push their way out of the ground.

Prospective immigrants may find it to their advantage to purchase implements in common and work together in starting their farms.

#### IMPORTANT.

The State of Wyoming has secured the services of Dr. V. T. Cooke, for the purpose of supervising the demonstration of the possibilities of dry farming in Wyoming. Dr. Cooke is expected to assist any one in the state who is interested in this work by furnishing him with information and advice. By writing to him at Cheyenne, the prospective dry farmer can secure information based on many years of actual experience in directing dry farming operations. His advice as to the proper seeds to be used in the different localities will be found very valuable.

A visit to the experiment farms near Cheyenne and elsewhere in the state, as most convenient, will do more to convince an interested party of the possibilities of this method of farming than all the literature which can be furnished.



Nurseries Have Been Established in Several Parts *of* the State.



The nursery of the Wyoming Plant and Seed Breeding Company, the second year from the sagebrush, Worland, 1908.

Tests made by the United States Government Experiment Stations at Cheyenne and Newcastle have shown that a limited amount of ground can be profitably irrigated by means of windmills and reservoirs, or by pumps worked by gasoline or other engines. As the dry farmer is, as a rule, dependent upon wells for his water supply, he should, by all means, supplement his farming with a garden of from one to five acres, for which a pumping plant of sufficient reservoir capacity can be put in place for a moderate sum. The government experiments have shown that there is a good profit in gardening under these conditions, and by application to the United States Irrigation Investigations Department, Cheyenne, those interested can secure pamphlets giving the results of experiments and comparative statements as to cost and efficiency of the different makes of windmills and gasoline engines used in demonstrations.

The State Dry Farmer, Dr. V. T. Cooke, has prepared the following Do's and Don'ts for the Dry Farmer, and will be valuable reading:

## DO

Plow deep, at least 8 to 9 inches, more if possible.

Your plowing at the right time.

Your harrowing and cultivation as soon as the ground is dry enough.

Learn to take advantage of soil conditions.

Study the capability of your soil.

Sow a small amount of the best seed obtainable per acre.

Fan all seeds and use only the plumpest and cleanest seed possible.

Sow all seed with a drill.

Harrow or use a weeder on all your growing grain in the spring.

Cultivate your alfalfa or meadows by using a disc or alfalfa harrow.

Harrow your plowed ground as soon as plowed in the spring and summer.

Learn that cultivation conserves moisture.

Good and thorough work; it will pay.

Learn to rotate your crops and keep everlastingly at it and success is assured.

## DON'T

Plow when your soil is wet.

Harrow or cultivate your land when it is wet.

Plow your ground in the fall and harrow it fine; it is liable to blow away or drift; leave it rough.

Use poor seed and expect good results.

Sow your grain mixed with pernicious weed seed.

Over seed.

Sow broadcast.

Sow grain by hand and then run a disc over the land, and expect a good crop.

Sow alfalfa seed on sod ground.

Sow a nurse crop with alfalfa seed.

Forget to harrow the weeds as soon as they appear.

Let the manure go to waste.

Let weeds grow, they are hard to get rid of when large, besides using up the moisture and fertility that crops need.

Forget that all soils are not alike and therefore cannot be treated the same.

Realize there is always a ready market for first-class stock and that scrubs don't pay.

Make up your mind what you intend to do, make your plans accordingly and carry out your ideas.

Have an alfalfa or rye lot, or rather lots, for your hogs and growing pigs, and learn that to get results from these pastures it pays to feed some grain if only a little every day.

Get your alfalfa seed bed in the best possible state of tilth; learn that alfalfa fields will last indefinitely, provided you get a good stand, will cultivate them with a disc or alfalfa harrow thoroughly, after each cutting and will manure them.

Not forget that taking your crop off on four legs is one of the best ways to make clear money off of your farm, besides improving its fertility by keeping all manure on your land. This method of farming, if carried out properly, makes your land of greater value year by year, and you will have larger returns from your work. In other words, feed your crops to those animals which you like best, be they cattle, sheep or hogs.

Not forget that to raise crops and feed them successfully, requires brains as well as muscle.

Keep in touch with your agricultural college, get your name down for their bulletins and recollect that the professors are experts in their different lines, and that they will always be glad to assist and advise if you will only show your interest in their work by asking for information.

Scratch your ground and call it plowing and expect good results.

Be discouraged if your crops do not meet with your expectations; It takes time to learn how to do things properly, besides the season may not be favorable.

Forget that it is just as easy to get big crops as small ones, better seeds and better culture will increase yields.

Feed your horses oats in which there are more or less wild oats, horses with poor teeth cannot masticate or grind their food properly—result, wild oats are passed on to the ground where working.

Forget that scientific or expert farmers can not make hard and fast rules for every farmer. Farmers must study and work out their different conditions more or less for themselves.

Forget the federal government at Washington, D. C., issues bulletins on most, if not all, farm topics. These can be had for the asking, are written by men who make a special life study of their different departments. One very great objection is, they are too cheap; ask and you will receive.



Wyoming Has Scenic Attractions Unsurpassed Anywhere in the World.



A scene on New Fork Lake, in the Wind River Range, one of the series of most wonderful views to be found in the world today.

There are exceptions to all rules. The above may not apply everywhere or to all conditions, but is worth the careful consideration of the man who is dry farming anywhere.

## PLOWING.

Professor B. C. Buffum of Worland, Wyoming, has prepared a valuable book entitled "Arid Agriculture." By special permission, we reproduce here extracts from Chapter 3, which give valuable information in regard to plowing western soils.

**PLOWING.**—"Stirring and mixing the soil is the fundamental labor of agriculture."—(*Roberts.*) Plowing is the foundation upon which the superstructure of farming is built. It is the matter of first concern to the farmer. Plowing seems to be a simple and easy process, but both the science of the why and the art of the how, are deep subjects. The character of his plowing displays the knowledge of the dry farmer and underlies his success.

**DEPTH OF PLOWING.**—With hardly an exception the recommendation to the dry farmer is to *plow deep*. Ordinarily this means to plow as deep as possible, which will generally be from seven to ten inches. This first commandment for dry farming is probably the one most often broken. It is not always possible to plow deep. The soil may be hard. The farmer more often does not have sufficient power to pull his plow. A common condition on western farms is small horses, few of them, and lack of that care which gets the most out of a horse. Sometimes the right kind of plows are not at hand or are not kept in best condition.

**WHY PLOW DEEP?**—The first reason we plow deep is to make a large reservoir to absorb and hold the moisture. Our soils have been pounded down for centuries by the patter of rains and the feet of animals. They are too compact and have perhaps never been wet to a depth of more than a few inches. When in tilth some of these soils will absorb over 40% of their weight of water. If they contain from 8% to 20% of moisture they are in condition to support growing crops. A crop of oats at Laramie did not wilt for some days when the soil contained as little as 3% of moisture.

**INCREASES STORAGE CAPACITY.**—How the storage capacity of a soil may be increased by deep plowing may be illustrated by a few figures. A soil weighing one ton per cubic yard, weighs approximately 1,613 tons per acre taken one foot deep. If such a soil will absorb and hold 20% moisture and is plowed six inches deep, it will take up 161.3 tons of moisture per acre. A rainfall of 1.4 inches will supply this amount of moisture and fill up our six-inch reservoir. If the ground is plowed only three inches deep, and the sub-soil is hard, it would not be able

to store a rainfall of more than seven-tenths of an inch and should more water fall at one time it will be lost and may wash the soil away with it. If plowed nine inches deep and put in good condition, such a soil reservoir would absorb and hold over two inches of rainfall at one time. A soil already containing a considerable water would be filled up with less rain, and deep plowing would be still more important.

**PULVERIZES AND FINES THE SOIL.**—Deep plowing is usually good plowing in that it grinds up and pulverizes the soil. Soils that are plowed deep come more rapidly into good tilth. Fining the soil particles releases and makes available plant food. It lets in warmth and air and gives better chance for the activity of chemical agents and bacteria.

**DEEP PLOWING GIVES ROOT PASTURE.**—The larger part of soluble plant food becomes available in the surface soil. Plant roots pass through it easily and here they send out their feeders to make use of the foods ready for them. If four inches of the surface soil is kept stirred for mulch the difference between plowing seven inches deep and eight inches deep equals twenty-five per cent in the area of the surface soil upon which the roots feed.

**DEEP PLOWING SAVES THE SOIL.**—Where the soils are light and winds drift them, shallow plowing may result in all the top soil, down to the sole of the furrow, being blown away. Deep plowing, on the contrary, throws up heavier and rougher furrows, and tends to anchor the soil in place. Plowing deep, therefore, prevents both washing and drifting.

**WHERE DEEP PLOWING MAY NOT DO.**—Where soils are heavy, it often happens that only an inch or two of the surface is in condition for the growth of plants. Turning this surface soil under and covering it deeply with cold, untamed and unproductive clay, may prevent raising a good crop for longer time than it is desirable to wait. This seldom occurs in dry farming, for the summer fallow will tend to put the soil into tilth before the first crop is planted. Some soils may be so shallow that it is not well to plow them deep. Where irrigation is practiced in some of our drier regions, where the soil is very poor in vegetable matter, merely discing two or three inches of the surface often gives a better first crop of grain than plowing. Such soils must be irrigated often and carefully because the soil may wash and the area for storage of moisture is so small that it dries out quickly. Generally a soil that is suitable for dry farming is one which may be plowed deeply.

**SUB-SOIL PLOWING.**—Subsoiling is done by using a digger which follows the plow and tears up a few inches of the furrow sole or by means of a mole polw which is run underneath the furrow and lifts and breaks up the subsoil to the depth of fifteen inches or eighteen inches. It is expensive to prepare ground by subsoiling and is not recommended for general practice. Our rainfall is so small that so large a reservoir



*The Small Ranchman Usually Becomes Independent in a Few Years.*



A view of Mountain Ranch in Salt Creek Valley, near Newcastle, Weston County. Altitude, 5,100 Feet.

There are hundreds of just such small ranches as this one and as a rule the owners are prosperous. By cultivating the available creek bottoms and raising hay and grain for winter feed for the cattle and sheep which range the surrounding hills, a constantly growing and profitable business is created.

is not needed for storage of moisture and where irrigation is practiced there seems no advantage from filling so much loose soil with water at one time. There are places where subsoiling is advisable, and it often proves profitable for root crops or *preparation of land for tree planting*.

**SECOND PLOWING.**—The second time the soil is turned, plow about two inches shallower than the first plowing. This is to avoid turning up the undecomposed sod. In our dry climate it ordinarily takes more than one year to incorporate any vegetable matter plowed under, with the soil. Crops plowed under when green or well rotted manure, will become humus much more rapidly than will dried-out materials. Sometimes it is best to back-set the land by turning the furrows the same direction as the first plowing. If the land is in good condition, cross-plowing will do more to pulverize and make a good seed bed. It is economy to make the lands as long as possible to avoid much turning at the corners and tramping. If a soil is plowed year after year at the same depth the sole of the furrow becomes packed and hardened by the smoothing action of the blow bottom, and by the tramping of the horses. This may bring good results sometimes where irrigation is practiced but in dry farming doing alternate plowing at different depths tends to break up the furrow sole and allow movement of moisture to and from the sub-soil.

**GOOD PLOWING.**—Good plowing is the kind that gives the best results in the crop. What good plowing is, depends on conditions, but the work should be well done. Poor work always leaves its mark and the mark is always a minus sign when its results reach the pocket book. Good plowing may be defined as the smooth, even furrow so turned that the soil moved sets more or less on edge with few and small air spaces underneath, and with the furrow slice crushed and pulverized as much as possible. Good plowing indicates that all the soil is plowed. There should be no skips and the cut and cover method is absent. To do good plowing the furrow should be cut no wider than the plow-share and to be on the safe side good farmers cut an inch or two narrower than the size of their plows. The plow should be kept sharp and the lays properly shaped. A factor in good plowing is to do the work when the soil is in the right condition. This will differ on every farm. Heavy clay soils must not be plowed too wet. There is little danger of working our more sandy soils when wet. Western soils may be plowed when quite dry and left in condition to absorb the first rains or melting snow. The lime in them insures flocculation and there is little danger of dry puddling.

**WHEN TO PLOW.**—Late fall or early spring plowing is practiced to absorb moisture. In some parts of the West, where the rainfall comes mainly in the winter season, the soils may get so hard and dry that until the rains come it is not possible to plow them in the fall.

Where the rainfall comes in the spring and summer the soils are usually in such condition that they may be plowed in the fall, though they are sometimes very dry. A comparatively new practice is to disc the sod or stubble immediately after a crop is harvested to save the moisture and keep the soils in condition to be fall plowed. The spring season is usually the most busy one and especially is, this so at high altitudes where the spring work must be done in a very short time. Having the plowing out of the way by doing it in the fall, enables the farmer to get his crop in early in the spring, and it leaves the soil in the best condition for his seed bed. Small seeds, as alfalfa and grains, do much better if they are planted on plowed ground that has become fairly compact. Plowing for potatoes or root crops where the soil is compact should be done immediately before the time of planting. Plowing for fall sown grains, under the two year fallow system, is better done in fall if possible, or it may be done in spring or early summer.

**A WORD ABOUT PLOWS.**—The mould-board plow will do better work than the disc. On this account we strongly recommend the use of mould-board plows for first breaking the sod. Disc plows have come to stay, and while they do not do good enough work on sod, they give excellent results for stubble or other old ground, and the draft is easier than with the mould-board plow. The disc is also important to the dry farmer because with it he may plow soils so dry that the old form of plows could not be made to stay in the ground. The main difficulty with the disc plow is not so much in its use as in its mis-use. Nearly every one tries to cut too wide a furrow with their discs, which results in a sort of cut and cover plowing which will not give the best crops.

No one form of mould-board plow can be recommended for all soils. Where the soil contains much clay or gypsum and lime, we have found the steel mould-board will scour better than a chilled plow. We believe in using a plow with a steel mould-board and with interchangeable lays. The use of cast shares has some advantages. On hard soils they are cheaper. The old share when worn out is thrown away and the new one put on always leaves the plow full width. Every time a steel lay is sharpened it gets smaller, so a fourteen-inch plow does not remain fourteen inches. The steel lays are useful, however, in many soils, and if a farmer has a soil upon which he can use both kinds, he can take advantage of all these conditions.

**POWER PLOWING.**—Where fields are large enough and long lands can be laid out, plowing by steam or gasoline is being adopted in many parts of the West. On our dry prairies, at considerable distances from water and coal supply, steam plowing proves expensive. There are new gasoline or kerosene power engines which are coming into much favor for both plowing and other forms of power needed on the farm. A



## High Altitude Farming is a Success in Wyoming.



Harvesting Irrigated Oats on the Stoner Ranch, near Cokeville, Uinta County. Altitude, 6,192 Feet. Compare the Standing Oats and Reaper Team.

Wyoming oats are at the head of the dealers' list for weight per bushel, and prize winners wherever exhibited. 138 bushels per acre for 40 acres is a record crop, and weight 47 pounds per bushel, grown at Millbrook ranch, Albany County. Altitude 7,200 feet.

steam engine requires for its running an extra man and team with water tank, and where distances from water and coal are great,\* this item of expense is a large one. For hill roads in California or on hilly land, upright steam engines are adopted in order to keep them from burning, on account of the water flowing to one end of the horizontal boilers and leaving the plates bare. The main difficulty with any kind of power plowing, seems to be lack of knowledge and skill on the part of operators. This kind of work has been eminently successful where men who understand their business can be obtained to do the work.

## Advantages of Irrigation.

IN every county in the state there are tracts of land favorably situated in regard to drainage upon which there is no doubt good crops can be raised by the dry farming method, but lands which are reclaimed by irrigation have a higher selling value, and a great proportion of the lands in Wyoming are only valuable for farming when placed under irrigation.

Agriculture in the Big Horn Basin is an irrigation proposition. This will also apply to the Shoshone Indian Reservation, the valley of the North Platte and southern Wyoming, and the countless valleys of the smaller streams. Nowhere in the West are conditions more favorable for irrigation than in Wyoming. Our mountains furnish an abundant water supply which can be conserved at the least possible cost. The land, a rule, lying in terraces running back from the valleys of the streams, the distribution of the water is easy and economical. The yield from irrigated land is at least double that in the rain belt on the products which are generally raised in irrigated districts. The harvest is a certainty, as the timely application of water insures a crop, and there are practically no storms of rain and hail to lay waste the fields. The continual sunshine produces products of better quality.

A water right when once secured attaches to the land and cannot be separated from it. The soil in almost all of our valleys is largely sedimentary. It is the wash from the disintegrated mountains and foothills, and, under natural conditions, produces the short grass and sage brush of the arid plains, by reason of the lack of sufficient moisture to fully utilize its fertility.

The tremendous yields obtained under irrigation are simply due to the supply of sufficient water to liberate the elements of plant life. The fertilizers for which the farmers of the East have to spend thousands of dollars are already in the soil. Everything native to the central temperate zone can be raised with success, including cereals, forage, roots and fruit. In some parts of the state, Indian corn is successfully grown,

but at the higher altitudes it is found that the nights are too cool for the growth necessary.

The greatest forage crop is, of course, the natural grass, which covers more or less thickly the surface from the lowest valleys to the timber line of the mountain ranges. This native grass is one of the wonders of the semi-arid region, and its nutritive power renders stock growing both easy and profitable.

The new settlers must be willing to take advantage of the experience of their neighbors, and not attempt to grow grains or grasses which have, by experiment, been found not to be desirable for the particular locality in which they settle. The Wyoming Agricultural College at Laramie will be glad to send bulletins, upon request, showing investigations of profitable crops grown at different altitudes.

On the Laramie plains a forty-acre oat field produced one hundred and thirty-four bushels of oats to the acre (weight by measure 47½ pounds per bushel), the elevation being in excess of 7,000 feet. Another tract of ground, never before cropped, produced one hundred bushels to the acre.

In Johnson County more than nine hundred bushels of potatoes were raised on one acre of ground.

Fruit trees and small fruit do well in all parts of the state if proper protection is given to the young orchards and bushes.

The advantages of irrigation are so marked that practical nurserymen are planting orchards under the canals, anticipating a much greater return from their young trees than possible in humid regions, it being found that the best orchards yield a full crop every year.

### AVERAGE WYOMING CROPS.

The following is the average per acre of those crops upon which authentic reports could be obtained in 1905 :

Alfalfa, per cutting (two cuttings).....	2½ tons
Timothy . . . . .	2 tons
Native and other hays.....	1½ tons
Potatoes . . . . .	201 bushels
Onions . . . . .	45 tons
Parsnips. . . . .	30 tons
Carrots . . . . .	25 tons
Beets . . . . .	35 tons
Sugar Beets . . . . .	22 tons
Turnips . . . . .	40 tons
Tomatoes. . . . .	190 bushels
Cucumbers. . . . .	133 bushels
Peas . . . . .	50 bushels
Beans . . . . .	22 bushels
Pumpkins, number per acre.....	950
Squash, number per acre.....	1,769



# Wealth is Here in Power *and* Irrigation Possibilities.



A View of Clear Creek, near Buffalo, in Johnson County.

Clear Creek is one of the most important streams in Northern Wyoming, and during its course from the Big Horn Mountains, through the miles of fertile valley, lined with prosperous ranches, to its mouth, the waters of this stream are constantly contributing to the wealth of the State.

Watermelons, number per acre.....	1,115
Muskmelons, number per acre.....	1,112
Cabbage . . . . .	2,719
Cauliflower . . . . .	4,000
Wheat. . . . .	30 bushels
Barley. . . . .	25 bushels
Rye. . . . .	20 bushels
Oats . . . . .	50 bushels
Corn. . . . .	20 bushels
Raspberries . . . . .	962 quarts
Strawberries . . . . .	6,920 quarts
Cherries . . . . .	4,356 quarts
Blackberries. . . . .	9,500 lbs.
Currants . . . . .	21,000 lbs.
Gooseberries . . . . .	29,000 lbs.

#### CROPS AND FARM VALUES, 1907.

<i>Crop</i>	<i>Acres Planted</i>	<i>Average Yield Per Acre</i>	<i>Average Price Per Bushel</i>
Corn . . . . .	3,000 acres	25 bushels	70c
Spring Wheat . . . .	30,000 acres	28.5 bushels	77c
Oats . . . . .	30,000 acres	37 bushels	53c
Barley . . . . .	4,000 acres	32 bushels	54c
Rye . . . . .	400 acres	23 bushels	66c
Potatoes . . . . .	5,000 acres	200 bushels	74c
Hay . . . . .	250,000 acres	2.1 tons	\$7.50 per ton

Wyoming produced more oats than either Utah, Nevada, Louisiana, New Mexico or Arizona, more barley than Missouri or New Mexico. Wyoming produced an average of 2.10 tons per acre of hay, which was greater than the yield in Iowa, 1.40 tons; Nebraska, 1.50 tons; Missouri, 1.40 tons; Kansas, 1.15 tons; Texas, 1.30 tons; Montana, 1.70 tons; Nevada, 1.74 tons; California, 1.75 tons; and New Mexico, 2.05 tons per acre.

In Irish potatoes Wyoming's yield was 25% greater per acre than Colorado, Montana and Washington and double that of Utah. Note that the average yield in Wyoming was 200 bushels per acre, while the yield per acre in Iowa was but 75 bushels; Nebraska, 73 bushels; Missouri, 82 bushels; Kansas, 65 bushels; Idaho, 145 bushels; Louisiana, 67 bushels, and Texas, 73 bushels. Under irrigation larger crops are grown. Even corn yielded more per acre in Wyoming than in the great corn growing states of Kansas and Nebraska. The corn crop in Nebraska averaged 24 bushels per acre, Iowa 29.5, Missouri 31, Kansas 22.1, Wyoming 25, Colorado 23, Utah 23.

While the number of farms in Wyoming is less than in the more populous states, the value per acre is much higher. The farm values

of the different states per acre are: Nebraska, \$10.43; Iowa, \$11.78; Missouri, \$13.65; Kansas, \$9.25; Wyoming, \$18.89; Utah, \$18.21.

#### SOME ACTUAL YIELDS IN BIG HORN COUNTY.

Below we give the average yields reported by some of the farmers in the immediate vicinity of Cody, for the season of 1907: Geo. W. Burch, 24 acres oats, 105 bushels per acre, weighing 40 pounds to the bushel. Wheat, 22 acres, 58 bushels per acre.

Robert Looney threshed over 100 bushels of wheat to the acre.

J. C. Lucas raised 50 bushels of wheat and 70 bushels of oats to the acre.

John Corless, oats 33 acres, 1,482 bushels, weight 40 pounds, price \$1.50 per 100 pounds.

T. J. Walters, oats 21 acres, yield 30 bushels per acre, price received \$2.00 per 100 pounds.

C. R. Snyder, wheat 6 acres, yield 30 bushels per acre. Alfalfa, 200 acres, 500 tons, price in stack \$7.50.

H. D. Thompson, oats 78 acres, 2,360 bushels. Wheat 28 acres, 561 bushels. Potatoes 2 acres, 200 bushels.

A. C. Johnson & Son raised 33¼ bushels of barley to the acre, 50 bushels of potatoes on ¼ acre, and fair crops of oats and wheat. Mr. Johnson paid \$15.50 per acre for his land in 1902; present value \$60.00 per acre.

M. L. Freeborg, five miles southeast of Cody, raised 60 bushels of oats to the acre that weighed 40 pounds to the bushel; 300 bushels of potatoes on 1¼ acres that were sold for \$1.50 per cwt; 40 acres of alfalfa that sold from \$11.00 to \$12.00 per ton.

Eric Hedstrom, three miles east of Cody, raised 28 bushels of oats to the acre on a 9-acre field, 5 acres of which was volunteer, and 8,000 pounds of potatoes on an acre. Mr. Hedstrom purchased his land for \$15.50 per acre and says present value is \$75.00.

Roy Myers purchased 40 acres in 1902 for \$12.50 and 40 acres in 1906 for \$50.00 per acre, present value \$125.00 per acre. He raised 100 bushels of potatoes to the acre, 7 bushels of alfalfa seed to the acre that is worth \$9.00 per bushel; has 500 strawberry plants doing well, 14½ acres in oats and 20 acres in alfalfa.

J. D. Kaufman, 12 acres of oats, 55 bushels per acre, weight 43 pounds, price received \$1.75 per 100 pounds; ¾ acre potatoes, 200 bushels, price \$1.20 per bushel. Alfalfa, 50 acres, 200 tons, price in stack \$9.00. Alfalfa seed, 10 acres, 27 bushels, price \$9.00 per bushel. Three acres in young orchard doing well.

John P. Lindholm, five miles southeast of Cody, purchased his land for \$15.50 per acre, present value \$60.00 per acre. He raised 38 bushels of oats to the acre, 30 bushels of wheat and 2½ tons of alfalfa. His oats weighed 43 pounds to the bushel and sold for \$1.80 per cwt. His wheat sold for \$1.40 per cwt., and alfalfa at \$10.00 per ton.



## A Prosperous Ranch Home in the Big Horn Basin.



A View of Farm House and Field of Irrigated Potatoes, in Grey Bull River Valley, Big Horn County. Altitude, about 3,400 ft,



# Wyoming Has More Water for Irrigation Than Any Other Western State.



Big Wind River, which will furnish water for irrigating nearly 300,000 acres of land near Riverton, Fremont County. Looking up stream from the west boundary of the Shoshone Indian Reservation.



# Wyoming Has Five Million Sheep, Valued at \$17,000,000.



A Band of 3,000 Sheep at Alcova, Natrona County, near the Great Government Dam for Storage of Water for Irrigation Projects in the North Platte Valley.

Wyoming leads the West in the price per head for sheep, and the United States in the total value of its sheep, number and value of lambs, the amount and value of its wool clip and the average weight of fleece produced.

H. C. Fritzer, four miles southeast of Cody, says he paid \$15.50 per acre for his land and that the present value is \$65.00 per acre. He sold \$60.00 worth of tomatoes, and raised 600 bushels of oats, 145 bushels of wheat and 90 tons of alfalfa last year; has 20 apple trees doing well and raspberries and blackberries of good quality.

J. W. Howell, four miles east of Cody, purchased in 1903 160 acres at \$15.50 per acre which he says he would not sell for less than \$100.00 per acre. Mr. Howell raised 61 bushels of oats to the acre on one field of 20 acres and 40 bushels to the acre on a field of 60 acres, which weighed 45 pounds to the bushel and sold for \$1.45 per cwt.; 41 bushels of wheat to the acre, which sold for \$1.25 per bushel, and 100 bushels of potatoes on  $\frac{1}{4}$  acre, which sold at \$1.50 per cwt. He also has 4,000 large broad-leaf cottonwood trees, which he considers the best for this country, and 75 fruit trees doing well. He has 4,000 to 5,000 young cottonwoods for sale.

## State Lands.

THE State of Wyoming has a little over three million acres of lands granted for the support of the common schools, and also receives five per cent of all money received by the general government for the sale of lands in Wyoming. The State also has nearly seven hundred thousand acres of land granted to the support of the various institutions.

The State Land Board does not offer these lands for sale unless such sale seems to be to the benefit of the State by offering opportunities for home making or employment. When sold upon approved applications, the lands are offered at public auction and cannot be purchased for less than ten dollars an acre. Thirty per cent of the purchase price must be paid in cash, and the balance, if desired, may be paid in seven annual payments, with interest at six per cent.

In order to secure revenue for the common schools and the various State institutions, the Boards lease the State lands to parties making application for same, preference in original applications being given to residents of the State. After lease has been secured, the party is entitled to a preference right to a renewal of same at the end of the five year term, at such valuation as may be fixed by the Board. Most of the grazing lands are rented for five cents per acre per year. Lands susceptible of irrigation run from ten to fifty cents per acre per year, while indemnity school lands selected in the place desired by the applicants bring rentals of from ten to twenty-five cents an acre.

Information in regard to the lease of State lands can be secured by applying to the Commissioner of Public Lands, at Cheyenne.

## STATE COAL AND MINERAL LANDS.

The State has a number of school sections containing mineral leads and valuable deposits of coal, which deposits were not known to exist in 1890, at the time of the passage of title from the United States. These sections can be rented and mined upon a royalty basis, but a sufficient deposit is required, so that the lands will not be held for speculative purposes. Full particulars in regard to the lease and sale of these lands can be had by applying to the Commissioner of Public Lands, Cheyenne, Wyoming.

## THE CAREY DESERT LAND ACT.

"HOW TO OBTAIN A HOME."

Under the provisions of the Act of Congress, approved August 18th, 1894, donating to each of the arid land states one million acres of land, conditional upon its reclamation, the State of Wyoming has segregated forty-three tracts of land, aggregating nearly seven hundred and fifty thousand acres. In addition to the three hundred and twenty acres of land allowed by the government under the homestead and desert land laws to a qualified party, such party may also file upon one hundred and sixty acres under the Carey Act, providing that he purchase a water right from the association or company constructing a canal for the reclamation of the land, at a cost of from ten to forty dollars per acre, depending upon location. Not more than one-quarter of the purchase price can be required in advance from the settler, the remainder being payable in ten equal annual installments, with interest at from six to eight per cent per year. The settler has the privilege of paying all in cash if he so desires, or paying in full at the time fixed for any partial payment. Parties desiring to take up homesteads under this act are requested to write to the Commissioner of Public Lands, Cheyenne, who will be glad to give specific information in regard to any project, or to the address of the companies which have been granted contracts for reclamation, as shown in the following pages. Water rights to all lands acquired under the provisions of this act attach to and become appurtenant to the land. A payment of twenty-five cents per acre must be made at the time of making application for the land, and a fee of \$1.00 paid; within three years the applicant must show reclamation of one-eighth of the land and a continuous residence after the first six months. Application for patent must be accompanied by the final payment of twenty-five cents an acre and a state fee of \$2.00 for issuing the patent. If the land is reclaimed within the first six months, upon the showing of the construction of a substantial house and residence of not less than thirty days immediately prior to the date of making final proof the applicant may procure a patent for the land and may obtain such patent at any time after six months, upon making the proper showing.



## This was the Pioneer Horticultural Experiment in Wyoming.



Ed. Young's Apple Orchard at Lander, Fremont County. Twenty-five Varieties are Successfully Grown. Altitude, 5,000 Feet

Here is demonstrated by actual practice the raising of apples and other fruits at high altitudes. On the Laramie Plains, at an altitude of 7,400 feet, Mr. Jacob Lund matures Wealthy apples each year. At each county and state fair there is active competition among fruit enthusiasts for the place of honor for their products.

The State Land Board does not allow a canal company to sell water rights until its canal is completed to the point of diversion of the water contracted for, unless it is provided that the contract and money, or evidence of indebtedness, are deposited with the application of the settler and the proper fees, in escrow in the office of the Commissioner of Public Lands, there to be held until the canal is ready to deliver water. This allows the settler to begin the improvement of his land in the season prior to the anticipated completion of the canal, so that when the canal is ready to furnish water, he is ready to put in a crop and make his final proof the same season.

A party having an uncompleted homestead entry under the United States law cannot make application for lands under the Carey Act until he is in position to make his home upon the land.

#### DISPOSITION OF MONEY.

The fifty cents per acre received by the State for these lands creates a fund for the reclamation of other lands, which is desposited in the State Treasury pending the accumulation of an amount sufficient to finance some reclamation project.

#### WHAT HAS BEEN DONE—CANALS CONSTRUCTED.

The Arid Land Act is now proving to be the most beneficial to the State of Wyoming of all United States laws, as Wyoming has more streams than any other western state.

The State Land Board has taken especial and practical interest in furthering the interest of the settlers. The state and national governments afford perfect protection for capital invested and to the settler for title to his land and the perpetuity of his water right. There is no possibility of loss to the individual investors or the settlers. The soil, climate and altitude of Wyoming are especially adapted to the most profitable crops grown by irrigation.

#### LIST OF IRRIGATION PROJECTS.

The following projects are ready for settlers and detailed information can be procured by writing to the addresses given, or by applying to the Commissioner of Public Lands, Cheyenne:

Cody Canal Association, Cody, Wyoming.  
Big Horn Basin Colonization Company, Cowley, Wyoming.  
Big Horn County Irrigation Company, Basin, Wyoming.  
Hanover Canal Company, Worland, Wyoming.  
Sahara Ditch Company, Buffalo, Wyoming.  
North Platte Canal & Colonization Company, Wyncote, Wyoming.  
Boulder Lake Canal, Boulder or Rock Springs, Wyoming.  
Lovell Irrigation Company, Lovell, Wyoming.  
Wheatland Industrial Company, Cheyenne or Wheatland, Wyoming.

Eden Irrigation Company, Rock Springs, Wyoming.

James Lake Irrigation Company, Laramie, Wyoming.

The following projects are not completed, but some of them will no doubt be able to make contracts for delivery of water at a future date, and parties desiring to settle under the canal should write them direct for specific information:

The La Prele Ditch & Reservoir Company, Douglas, Wyoming.

Medicine Wheel Canal Company, Basin, Wyoming.

Wyoming Land & Irrigation Company, Marquette Building Chicago, Illinois.

Lake View Irrigation Company, Cody, Wyoming.

Elk Canal Company, Lovell, Wyoming.

Tensleep & Bonanza Canal, 645 Cass St., Milwaukee, Wisconsin.

Thermopolis Irrigation & Investment Company, Thermopolis, Wyoming.

Other companies having projects under way not yet sufficiently advanced to warrant settlement, are:

Big Horn Basin Development Company, Cody, Wyoming.

Western Land & Irrigation Company, Saratoga, Wyoming.

North Platte & Encampment Canal Company, Encampment, Wyoming.

Hubbard Canal Company, First National Bank Building, Cheyenne, Wyoming.

The Green River Land & Irrigation Company.

Green River Canal Company.

McDonald Canal.

Hawk's Spring Canal.

Utah & Wyoming Canal & Reservoir Company.

Carbon County Land & Irrigation Company, Cheyenne, Wyoming.

#### OPPORTUNITIES FOR CAPITAL.

There are many opportunities for investment along streams where water can be stored. This kind of development is often delayed until the summer flow of streams is entirely utilized. Stored water always guarantees a good water supply and where conditions are favorable for impounding the surplus flow of streams some of the best and most prosperous agricultural communities will spring up. The largest project of this character that has been investigated lies south of the Grey Bull River in Big Horn County. The plans thus far outlined consist of a supply canal taking water from the Grey Bull River to storage works located on the heads of Cottonwood and Gooseberry Creeks. The lands to be reclaimed lie along these creeks. It is estimated that from 75,000 to 150,000 acres of land can be reclaimed under such a system. Surveys in detail have not yet been made and such a study should be completed before plans are made looking toward investment. This is a field for investigation and those who are seeking an opportunity to carry a large



Fruit Raising is Becoming One *of* the Important Industries *of* the State.



Jacob Lund and his orchard on the Laramie Plains, at an elevation of 7,400 feet, where Wealthy apples are matured each year.

undertaking to completion might well afford to make such surveys as would enable estimates of cost to be made. The project is now known as the "Buffalo Basin" enterprise.

As most of the feasible projects requiring the expenditure of a limited amount of capital have already been taken by local capitalists and associations, the attention of the investor is called to the fact that many of the large ranches of the State include areas of irrigable land to which early priorities for water are attached. The Ora Haley ranch, referred to in the Albany County pamphlet, is an example in point. This ranch is reported sold for a large amount, and is to be divided up into small farms and sold to settlers. The Bell ranch on the Laramie Plains, also in Albany County, has already been divided into smaller tracts, each of which is to support a new family, and many of them are already taken.

There are many opportunities for investments of this character, and the subdivision of the ranches into farms will insure a large profit to parties having the proper capital to invest. Any prospective settler desiring to purchase a small ranch is invited to correspond with the Department of Immigration, stating in what part of the state he desires to locate and how much capital he desires to invest. The Department will endeavor to place him in communication with some reliable party who will advise him of lands of the character desired which may be for sale in the specified locality.

There are a number of projects in different portions of the State which have been either too large for private enterprise or on which the first applicants have not completed their contracts and the lands are again available for entry and settlement by competent and reliable companies or associations seeking large and permanent investments.

The State Board of Land Commissioners guards the interests both of the settler and of the investor, and will do all in its power to promote the settlement and advancement of the state.

Capitalists are invited to enter into correspondence with the Commissioner of Public Lands and State Engineer, who will give them such information as is at their disposal.

## Government Lands.

### HOMESTEAD LAW.

A HOMESTEAD entryman must be the head of a family, or person who has arrived at the age of twenty-one years, a citizen of the United States, or one who has declared his intention to become such, and not the proprietor of more than 160 acres of land in the United States.

A woman can make a homestead entry as the head of a family, or femme sole, when over the age of twenty-one years, or a wife divorced from her husband, or deserted, so that she is dependent upon her own resources for support. A single woman making a homestead entry who marries before making proof may obtain title if she continues to reside upon the land.

Settlement must be made upon the land within six months of date of entry, and a residence of five years is required before making final proof.

Commutation can be made by making proof of settlement and residence and cultivation of the land for a period of fourteen months from the date of entry and paying \$1.25 per acre for the land (or \$2.50 per acre if within 20 miles of Union Pacific Railroad.)

The fees in the United States Land Office are \$22.00 for 160 acres outside the Union Pacific land grant, same covering alternate sections of land for twenty miles on either side of main line of the Union Pacific Railroad, and \$34.00 for 160 acres inside said grant.

A second homestead entry is granted to all those who lost, forfeited or abandoned their entries prior to February 8, 1908, provided the former entry was not cancelled for fraud or relinquished for a consideration.

Thousands of tracts of land, suitable for farming, under the dry farming system, are available for homestead entry. Prospective immigrants should, by all means, investigate the lands in Wyoming before taking up homesteads.

What constitutes residence upon a homestead entry? This question has puzzled the brain of many a man and woman who had a burning desire to acquire title to 160 acres of Uncle Sam's domain without living thereon for a period of five years. Some have the erroneous idea that a person may file a homestead claim, visit the same and sleep over night once in six months, and after five years of such residence (?) make final proof. It can only be done with a liberal amount of perjury thrown in. Visits to claims once in six months, or even oftener, do not constitute residence. It has been repeatedly held by the Secretary of the Interior that the home of the claimant must be upon the homestead to the exclusion of a home elsewhere—that the land must be actually inhabited.

The belief that the homestead law may be complied with in the matter of residence by visiting the land once in six months has doubtless grown up through the decisions of the Department that an absence of six months constitutes abandonment. In the days when the laws were loosely administered it was probably the practice of some to go to their claims and sleep once in six months, or perhaps oftener, and then secure witnesses who were willing to swear that the claimant actually inhabited the land. In such cases, and when there were no examinations made, the land officers were powerless, being compelled, in the ab-



Pleasant Home Surroundings Are to be Seen Everywhere.



Summer in Wyoming is a most delightful season. The above picture shows some fine lawns and grateful shade from glorious trees, at Buffalo, August, 1908.

sence of other testimony, to take the perjured evidence of the claimant and witnesses and pass the claim to patent.

The view has also been held by many that a single man has rights in the matter of residence superior to those of a married man. Where the truth is adhered to, this is not the case. A single man must live upon his claim just as faithfully as the married man; in fact, the married man may be absent from his claim practically all of the time earning a living if his family is inhabiting the land during his absence. In this respect the rights of the married man are superior to those of the single man.

Just what constitutes homestead residence has never been laid down by the Interior Department, and probably never will be. Each case is judged upon its own merits. It is pretty well established, however, what does not constitute residence, and it may be taken for granted that a person who maintains a family in one domicile while he is pretending to live upon a homestead is treading upon rather thin ice. The single man who has a ten-by-twelve cabin on a piece of land and sleeps in that cabin once in six months, choosing warm nights for the occasions, may also be considered beyond the pale of the law. The home, as a matter of fact, is easily recognized. It is where one lives—eats, sleeps, cooks, does washing, keeps his wife and babies, and enjoys the comforts and blessings of life. It is not a makeshift for the purpose of defrauding Uncle Sam of 160 acres of land.

In great generosity this beneficent government passed a law granting to those who are qualified title to 160 acres of land, provided they would live upon the same for a period of five years; or, in case claimants found themselves unable to live there for five years, then permission is given to make commutation proof after a period of fourteen months' residence, by the payment of \$1.25 per acre where the land is beyond the railroad limits, or \$2.50 per acre where the land is within railroad limits. Where entrymen elect to commute their entire after fourteen months, their evidence as to residence is scrutinized with greater care than if they elect to live upon the land for a period of five years. A recent ruling of the Interior Department requires that in case of entries made after November 1, 1907, commutation can only be made after fourteen months' actual residence on the land. The constructive residence of six months allowed in ordinary homestead cases is not allowed. All entries made prior to November 1, 1907, however, may be proved up with six months' constructive residence and eight months' actual residence.

The price of the homestead is the making of a home upon the land. The purpose is the settlement of the country and the building up of the nation. Those who do not make their homes in good faith upon the land are not complying with the spirit and purpose of the homestead law and cannot expect patent.

## DESERT LAND ENTRIES.

The right to make desert land entries is restricted to resident citizens of the state. The entryman must expend \$1.00 per acre each year for three years, and file proof thereof during each year, or he can make his final proof and receive patent prior to the expiration of three years by showing the expenditure of \$3.00 per acre and the reclamation of one-eighth of the land, which must be five acres for each forty-acre tract. A payment of twenty-five cents an acre is required at the time of making entry, and \$1.00 per acre at the time of making final proof, and only lands which will not, without artificial irrigation, produce an agricultural crop, are deemed desert lands. No person can enter more than 320 acres of land in the aggregate, so that a party making a homestead entry can only make a desert entry of 160 acres.

### DESERT LAND FINAL PROOF.

During the past three years the regulations relating to final proof upon desert land claims have been changed so frequently that few entrymen are aware of just what is required by the Land Department. Even the clerks of court, United States Commissioners and local land officers are not always certain as to the requirements in the matter of water rights.

If claimants will scrupulously adhere to the following instructions it is probable they will have no trouble in securing patent:

FIRST—It must be shown that claimant has expended in permanent improvements, such as water right, ditching, grubbing sagebrush, first plowing of the land, fencing, etc., an amount equaling three dollars per acre.

SECOND—It must be shown that claimant has irrigated all the land within his claim susceptible of practical irrigation, and that he has raised an agricultural crop upon at least one-eighth of the entry. If there are any high places or rocky portions that cannot be irrigated, the facts relating thereto should be explicitly set forth in the proof, and if there are any entire subdivisions that cannot be reclaimed, they must be relinquished.

THIRD—If an agricultural crop cannot be raised upon the land because of its altitude or other unusual conditions, then a merchantable crop of hay will be accepted in lieu thereof, but all the facts as to why an agricultural crop cannot be raised on one-eighth of the land must be fully set forth. An "increased growth of grass" will not be accepted as sufficient in any event.

FOURTH—Claimant must show title to a permanent right to the use of sufficient water to irrigate all the land in his claim that is susceptible of irrigation. If this title is secured under the state law through the State Engineer's office, then a copy of the certificate of appropriation from the Board of Control should be furnished; or, if the certificate has not been issued, a copy of the permit from the office of the State Engineer



*The Country South of the National Park is a Veritable Wonderland.*



Jackson Lake and Mt. Moran, one of the grand views for which Northwestern Wyoming is justly famous.

showing the land areas covered and that the completion of the appropriation has been reported to the State Engineer's office. Care should be taken to have the permit for a sufficient acreage to cover all the land in the entry that can be irrigated, for the reason that the Land Department will not accept proof showing water right for a lesser acreage than can be reclaimed.

The most recent regulation in the matter of water rights promulgated by the Commissioner reads as follows:

"That the regulations governing final proofs in desert land entries be modified to require the entryman to show in making final proof that he has a right to the use of sufficient water to properly irrigate the irrigable land in his entry; that he has done all that the laws of the state or territory require him to do for the maintenance of that right, and that he has actually used the water for the irrigation of the land embraced in his entry."

A second desert land entry is given to those who lost, forfeited or abandoned their former entries prior to March 26, 1908, provided the former entry was not cancelled for fraud or relinquished for a consideration.

It is the rule of the Land Department in all agricultural land cases to accept the testimony of a claimant and two witnesses in all matters that do not require record evidence. After desert claimants have secured from the office of the State Engineer a copy of their permits, with the notation thereon that report of completion was filed upon a certain date, it would appear that all other evidence relating to the diversion of the water, the dams, ditches, irrigation, etc., could just as readily be furnished by the claimant and witnesses as by a Water Commissioner acting through the office of the State Engineer, and it is believed that such proof would be accepted by the Land Department.

In taking final proofs upon desert land entries, clerks of court and United States Commissioners should exercise great care in taking the evidence of claimants and witnesses in the matter of water rights. The testimony should be as full and complete as it is possible to get it, covering in detail all the points mentioned in the foregoing requirements.

### ISOLATED TRACTS.

When a tract of government land, containing 160 acres or less, is entirely surrounded by deeded lands or lands applied for under any of the provisions of law, the said tract is deemed an isolated tract and may be purchased at not less than from \$1.25 to \$2.50 per acre. The applicant must make a deposit to cover the advertising expense and must bid the land in at public auction. If the land is within the railroad limits, a minimum price of \$2.50 per acre is charged.

Each application for the purchase of any isolated tract is subjected to the most rigid scrutiny by the Department, and all answers to questions must be reduced to writing, signed and sworn to before the Register

or Receiver, who will, in addition, make inquiries as to the good faith of the applicant and his purpose in having the lands ordered into market. No sale will be authorized upon the application of a person who has purchased, under section 2445 R. S., or the amendments thereof, any lands, the area of which when added to the land applied for shall exceed approximately 160 acres, and no sale will be authorized for more than approximately 160 acres embraced in one application.

### TIMBER AND STONE ACT.

The Act of Congress of June 3, 1878, as amended by the Act of August 4, 1892, provides for the sale of timber or stone lands, each qualified person or association being entitled to enter 160 acres. The land must be chiefly valuable for timber or stone and unfit for cultivation at the time of the sale. It must be unreserved, unappropriated, uninhabited and without improvements, except for ditch or canal purposes, save such as were made by or belong to the applicant. Mineral lands cannot be taken under the act. One entry only can be taken by a person or an association of persons. In case of an association of persons, each member must be a qualified entryman; that is, a citizen of the United States or one who has declared his intention to become a citizen. A married woman may take a timber and stone claim, but must furnish evidence that she is purchasing the same from her own individual funds.

In the case of timber and stone entries the government requires that the entire purchase price shall be paid down at the time of making final proof, which must be offered within ninety days of the time of filing the sworn statement in the land office. The purchase price is confiscated by the government in case fraud is proved. The only other expense, in addition to the price per acre for the land, is the Register and Receiver's fee of ten dollars and the cost of reducing the testimony to writing, about \$2.50. Under this act the land is appraised and sold at the approved value, not less than \$2.50 per acre.

To acquire title to land under this act, it must be clearly established that it is more valuable for either timber or stone, as the case may be, than for any other purpose. If the land is taken for timber, it must be proved that there is timber thereon which renders it more valuable therefor than for any other purpose for which it might be used. It has been held by the Secretary of the Interior that "timber," as the word is used in said act, refers to such trees as are valuable for commercial purposes, and does not include trees that are valuable only as cordwood.

Where entries are taken for stone, they may include limestone or slate. It must be shown in every case, however, that the land is more valuable for the stone it contains than for any other purpose.

No residence is required on a timber and stone claim, and patent can be secured in about a year's time, where there is no taint of fraud connected with the application or proof.



Sheridan County has a Lower Altitude than Any Other County in the State.



Ranch Scene on Beaver Creek, near Sheridan, in Sheridan County. Altitude, 3,500 Feet.

One of the most prosperous farming communities of the West is the region surrounding Sheridan, in Sheridan County, where everything in the vegetable, fruit and grain line can be raised. A number of coal mining towns and railroad facilities provide ready markets.

## MINES AND MINERAL LANDS.

Lands valuable for deposits of mineral, such as fire and pottery clay, marble, asphalt, soda, sulphur, diamonds or of the precious common metals, are subject to sale under the mining laws. A location must be first duly made and recorded, and certain sums must be annually expended. Five hundred dollars' worth of labor and improvements must be laid out on each claim before patent can be applied for. The rules and regulations and methods of procedure are too extensive and complex to be reviewed at length in the compass of this brief article. Mining locations defeat all railroad and state selections, if the mines and minerals were known to exist, or were discovered prior to the date of government survey and the lands marked mineral, or the time the road and state claims took effect. Homestead, desert and timber and stone entries cannot embrace known mineral lands, unless it can be first shown that the lands sought to be entered are more valuable for agricultural purposes than for the mineral they contain.

The extent of the Wyoming coal measures is indicated by the fact that sixteen million acres were withdrawn by the General Land Office under orders of the president in 1906. The greater portion of this land is now restored to coal entry, but a large area near mines now in active operation is still withdrawn. By making inquiry at the local land office of the district in which the coal land upon which filings are to be made is situated, the applicant can secure complete information of the present conditions.

The United States land offices for the several districts in Wyoming are as follows: Albany, Carbon and Laramie Counties, and a few townships of southeastern Sweetwater and southeastern Fremont County, at Cheyenne, Wyoming; Sweetwater and Uinta Counties, at Evanston, Wyoming; Fremont and western Big Horn County, at Lander; Johnson, Sheridan and eastern Big Horn County, at Buffalo; Crook and Weston, at Sundance; Converse and Natrona, at Douglas.

By writing to the Department of Immigration, Cheyenne, copies of mining laws of the United States and State of Wyoming, as well as other printed matter relative to the irrigation and mining enterprises of the state and a large complete map of the state will be sent without charge

## Government Reclamation.

WYOMING takes pride in the Act of June 17th, 1902, providing for the use of the moneys received from the sale of public lands for the reclamation of arid lands by the government. Its representatives in Congress have advocated government reclamation for many years, and this act is the result of their tireless efforts. All the

moneys received from the sale of public lands go into a fund for the building of reservoirs and canals for the storage of water for irrigation. About fifty millions of dollars have already been placed to the credit of this fund, and it is safe to state that during the next ten years fully ten millions of dollars will be expended in Wyoming under this act, giving opportunity for settlers to obtain work while awaiting the delivery of water to their homesteads.

### NORTH PLATTE PROJECT.

The reservoir project, known as the Pathfinder, contemplates the building of an immense dam, three miles below the mouth of the Sweetwater River on the North Platte River, fifty miles above the town of Casper. The dam will be of masonry, constructed in a granite canon about two hundred feet deep, eighty feet at the bottom and one hundred and seventy-five feet at the top, covering about twenty-two thousand acres and storing one million acre feet of water. The entire flow of the Platte River passes through this reservoir and can be stored. The stored water will be turned loose and allowed to run down the river to the points of diversion of the several canals under contemplation. Power may be developed here whenever necessary. The elevation of the reservoir is about fifty-eight hundred feet above sea level.

### CANALS.

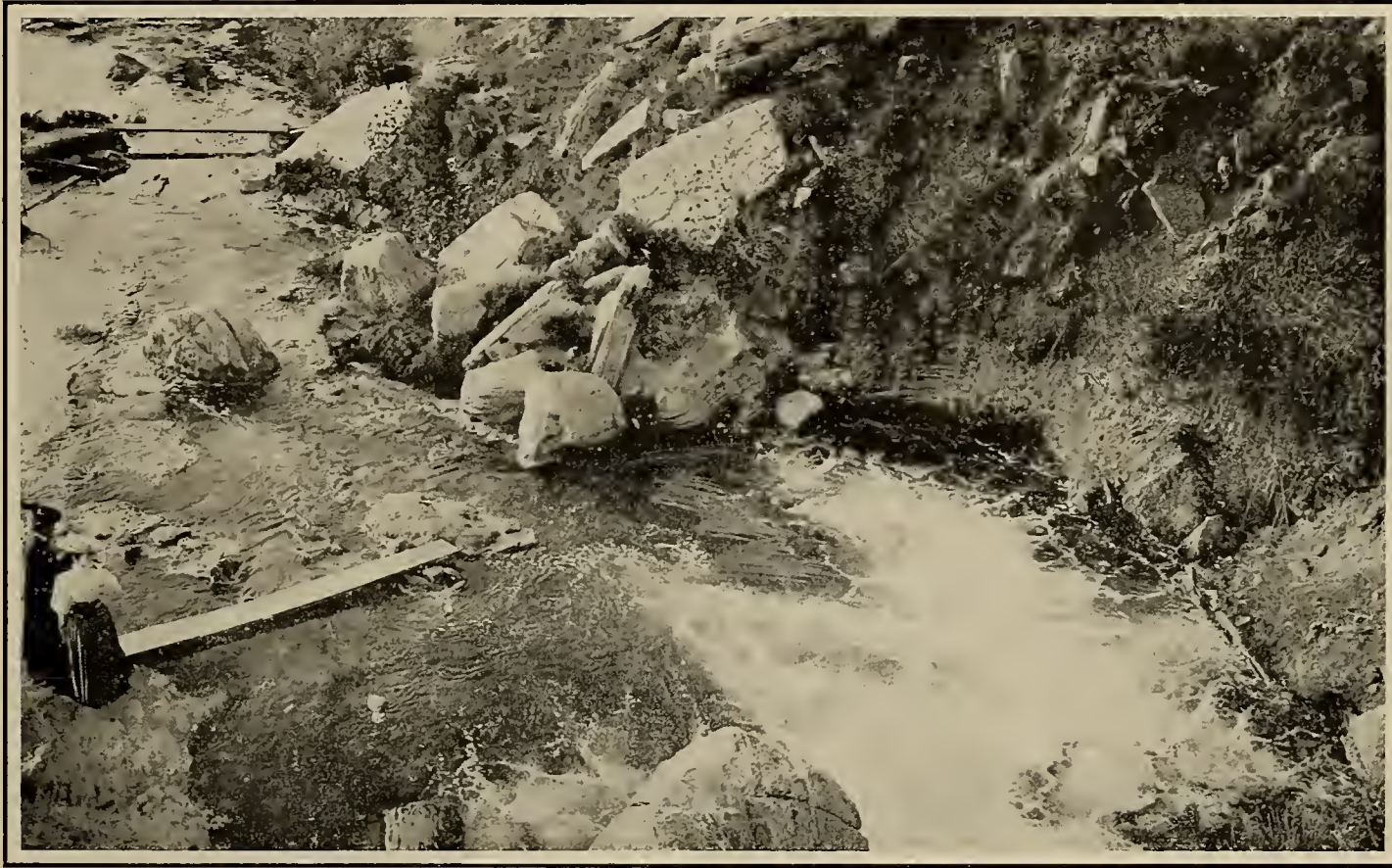
The first canal, contemplated below the reservoir, heads about eight miles above the town of Casper, on the south side of the river, and extends easterly to a point about opposite Douglas, Wyoming. The amount of land under the canal is about 30,000 acres. Preliminary surveys and estimates only have been made. These estimates show that the cost of reclamation will probably exceed \$25 per acre. Most of the land is in private ownership. The second canal is on the north side of the river, heading about opposite Glenrock and extending to Orin. It controls about 20,000 acres. The cost will probably be in excess of \$25. Most of this land is in private ownership. Preliminary surveys only have been made.

*The Contemplated Goshen Hole Canal* heads at the town of Guernsey, where a diversion dam 100 feet high is necessary. The length of the canal will be about 140 miles, of which six miles will be in tunnel. The area of land covered is about 150,000 acres, a large part being public land. The cost of reclamation has not been definitely determined, but it will probably be in the neighborhood of \$35 per acre. The feasibility of the canal has not yet been passed upon, further investigation being necessary.

*Fort Laramie Canal*, heading about eight miles above old Fort Laramie, on the south side of the river, covers some 50,000 acres, about equally divided between Wyoming and Nebraska. Twenty-five thousand



## These Springs are Forever Free to All Comers.



A Near View of the Great Hot Springs, Thirty Feet in Diameter and of Unknown Depth. Flowing Thousands of Gallons Daily of Scalding Hot Medicinal Waters, at Big Horn Hot Springs, Thermopolis.

When the Indians ceded this land to the State, Chief Washakie insisted that they should always be free to anyone who needed them, and the State has erected a stone bath house, free to all. Extensive grounds are reserved for those who come and camp at the springs, as well as private sanitariums and the Hotel Emery, one of the best in Wyoming.

acres are included in the estimate of the 150,000 acres under the Goshen Hole Canal. Preliminary surveys only have been made, but the indications are that the project is feasible.

*The Interstate Canal* heads at the same point as the Fort Laramie Canal, namely, eight miles above old Fort Laramie. There will be a diversion dam of concrete, 300 feet long, raising water ten feet above the bed of the river. This canal will be an enlargement of the Whalen Falls Canal. About 20,000 acres lying under the canal will be irrigated by the Whalen Falls Canal Company. Water is now available for this land.

Forty-five miles of canal in Wyoming have been constructed, and it is expected that the contract for the next fifty miles of canal will cover some 10,000 acres in Wyoming and some 50,000 acres in Nebraska, almost all of which is public land. The canal, when completed, will cover probably 100,000 acres of land and it is hoped that it will extend as far east as Bridgeport. The cost per acre will probably not exceed \$35. The Whalen Falls Canal has a priority calling for 280 cubic feet per second of water, but has no reservoir right. It is proposed to build all the laterals from the main canal, reaching practically every farm area. These farm areas will probably consist of eighty acres of good arable land, the homestead entry being limited to that amount. It is also proposed to build other canals on both sides of the river in Nebraska, probably by the extension of existing canals. This matter has not been investigated, but it is hoped to bring 50,000 acres more under cultivation by this means. The area to be irrigated, especially that in Nebraska and in the Goshen Hole, is comparable with land in and about Greeley, Colorado. The elevation is about 4,000 feet and the rainfall about thirteen inches per annum. The character of the soil is a sandy loam, with little alkali and little adobe. The Burlington railroad runs the entire length of the Goshen Hole and Interstate Canal lands. It is some 500 miles from Omaha and some 250 miles from Denver. The prevailing winds are from the northwest. The mean temperature is about 45°, with a maximum of 98° and a minimum of 20°. Humidity, 66 per cent. The evaporation over the area to be irrigated is about the same as for Eastern Colorado. Corn is successfully grown, frosts seldom interfering with its maturing.

### SHOSHONE PROJECT.

*Works Proposed*—The storage reservoir will be on Shoshone River, in Township 52 North, Range 103 West. It includes the lower portions of the North and South Forks of the river. Capacity at proposed flow line, 230 feet above bottom of river channel, 456,000 acre feet. Area of flooded area, 6,600 acres. Mean depth, 69 feet.

The storage dam is located at the head of Shoshone Canon in Section 7, Township, 52 North, Range 102 West. It will be seventy-five feet

long at bottom of river channel, 200 feet long on top, and about 300 feet in height above its foundation, which is about sixty feet below the bottom of the river channel. It will be an arched dam of concrete. Waste way will be 250 feet in length and connecting with a tunnel through the granite wall, which will discharge the surplus water into the river bed below the dam.

There will be two outlet conduits, leaving the reservoir at ten feet and sixty feet, respectively, above the bed of the river. The one leaving the reservoir at the elevation of ten feet will be a tunnel ten feet by ten feet in cross-section, 500 feet in length, and will discharge the water, which will be controlled by suitable gates, into the river channel below the dam, from which point it will flow down the channel to the lower diversion point near Corbett, a distance of sixteen miles. The upper conduit will be divided into four sections. Section 1 will be six feet by seven feet through granite, 3,230 feet in length, grade 2.64 feet per mile, capacity 500 second-feet. Section 2 will be a tunnel through granite and sand-stone, 2,593 feet in length, and will have the same cross-section, grade and capacity as Section 1. Between Sections 1 and 2 suitable waste gates will be placed. The water in Sections 1 and 2 will be under pressure from the reservoir. Section 3 will be an open cut, fourteen feet wide on the bottom; side slopes, 1½ to 1; depth of water, 7 feet; grade, 2.112 feet per mile; length, 3,000 feet; capacity, 500 second-feet. Section 4 will be a tunnel through limestone, with concrete lining; cross-section, 8 feet by 8 feet; grade, 7.92 feet per mile; length, 8,600 feet; capacity, 500 second-feet. At the end of this section the conduit reaches the upper portion of the irrigable land.

*Canal Lines*—High line starts from lower end of outlet tunnel. Bottom width, 26 feet; depth, 6 feet; side slopes, 1 in 2; grade, 1.056 feet per mile; capacity, 500 second-feet; length, 22 miles. Will irrigate 20,000 acres. At Eaglenest Creek it will be divided into three main laterals for irrigation of 20,000 acres north of Ralston. Low line canal heads in Shoshone River, sixteen miles below the damsite, or near Corbett station. A low diversion dam is already built. The first section will be a tunnel three and one-half miles long through sandstone and shale, and will be lined. Water section will be 10 feet by 10 feet; grade, 6 feet per mile; capacity, 1,000 second-feet. Below the tunnel the water will enter the main low-line canal which will extend to Frannie, a distance of forty-two miles, irrigating 80,000 acres. For ten miles the section of the canal will be: Bottom width, 38 feet; depth, 7.5 feet; side slopes, 1 in 2; grade, 1.056 feet per mile; capacity, 1,000 second-feet. Below this point the canal will be gradually decreased in size.

The total area of the reclaimed land will be about 120,000 acres. It is announced that 30,000 acres will be available for entry on May 1, 1908, at a cost of \$45 per acre for water rights, no interest being charged on deferred payments. Practically all this land is public domain, and is,



A Vacation Spent in This Country Would be Well Worth While.



Summit of the Wind River Mountains, between Big Wind River and Buffalo Fork, showing some scattered timber and fine grazing lands in the Yellowstone National Forest Reserve.

## Government Reclamation Work Means Much to Wyoming.



Canon of the Shoshone River at the site of the Government Dam, showing some of the machinery for handling the concrete. The concrete of the dam was seven feet below the still water shown underneath the bridge across the canon, May, 1908.



Johnson County has Always been Noted for Great Cattle Ranches.



View of Redman's Ranch in Clear Creek Valley, Johnson County. A Typical Cattle Ranch Scene in Northern Wyoming.

The beautiful valleys of this and other Northern Wyoming counties are lined with prosperous ranches, and the cattle range on the adjacent hills, where the nutritious native grasses keep them fat and make Wyoming grass-fed cattle proverbial for their size and excellent beef. This wonderful grass made Wyoming a reality.

therefore, subject to the conditions of the reclamation act. The farm unit has not been determined.

*Roads*—A wagon road from the lower end of Shoshone Canon to the damsite, a distance of four miles, has been built. The road will be extended around the reservoir to replace the portion of the road between Cody and Yellowstone Park, which will be covered by the reservoir.

*Location*—Big Horn County, Wyoming. Latitude, from 44° 30' to 45° N.; longitude, from 108° 30' to 109° 20' W. Townships 52 to 58 North, Ranges 95 to 103 West of 6th Principal Meridian. The town of Cody is in the upper portion of this tract. The Cody branch of the Burlington railroad traverses the tract. Distances by rail from Cody via Burlington railroad:

To Omaha, 982 miles.

To Chicago, 1,461 miles.

*Topography*—Irrigable lands are gently rolling bench lands; elevation, 4,000 to 5,000 feet. The drainage area above Cody is 1,480 square miles; above the damsite, 1,380 square miles. It includes the eastern slope of the Continental Divide in Yellowstone Park; elevation, 10,000 to 12,000 feet. The major part of the drainage area is in Yellowstone Park and the Yellowstone Forest Reserve.

*Climate*—Rainfall, from 8 to 16 inches. Run-off at Cody during 1903 was 1,027,900 feet, or 13 inches. Prevailing direction of winds is from the West. Temperature: Maximum, 95; minimum, 20; mean, 42°. Humidity, 65 per cent.

*Agricultural Possibilities*—Value of non-irrigated lands, \$1.25 per acre. Value of irrigated lands, \$25 to \$75 per acre. Types of soil, clay and sandy. Crops, alfalfa (two crops), oats, wheat, barley and vegetables. Range lands, ample. Fuel, coal, widely distributed.

## WIND RIVER RESERVATION.

By Act of Congress of March 3rd, 1905, part of the Shoshone or Wind River Reservation was opened for settlement under the Homestead Act in July, 1905. The portion ceded to the government and opened for settlement embraces the land lying north and east of the Big Wind River, and is to be disposed of only under the provisions of the homestead, townsite, coal and mineral land laws of the United States. The land lies at an elevation of from forty-three hundred to six thousand feet. Nearly three hundred thousand acres of virgin land can be irrigated from the great Wind River, one of the sources of the Missouri River, with two thousand square miles of timbered mountains and their vast snow banks, with lakes and reservoirs holding three hundred thousand acre feet of water, as the source of water supply.

The Wyoming Central Irrigation Company, a corporation organized under the laws of Wyoming, is under contract with the State to build a canal system covering all the lands which can be irrigated. Water rights, together with a proportionate interest in the canals and reservoirs, are sold at \$30.00 per acre on ten years' time, payable \$3.00 per acre down, and balance in ten equal annual payments, with six per cent interest. When the water rights have been sold, the system will be turned over to the management of the settlers under the canal. This reservation was selected by the Indians on account of its having a mild and equalable climate, live stock being able to run at large all winter. The Wyoming Central Company has established experimental farms for the information and instruction of the settlers, as to the value of various crops, character of soil and best methods of irrigation. Tributary to these irrigable lands is a vast area of grazing lands, two hundred miles square, where five hundred thousand sheep and one hundred thousand cattle can be grazed, which can all be fattened for market on the products of the farms in this tract. This farming district is surrounded by mineral districts containing coal, copper, oil, gold, building stone, marble, shale suitable for Portland cement manufacture, limestone and brick shales. The thriving town of Riverton has been built up, and the land under the first lateral constructed by the company, some fifteen thousand acres, has been filed upon, as well as many thousands of acres for which laterals have not yet been constructed. There are thousands of acres of valuable land open for settlement, and, by writing to the company at Riverton, pamphlets containing full description of the lands can be secured. The railroads give homeseekers rates twice a month, the land being directly tributary to the Chicago & Northwestern Railroad, which passes through Shoshoni, Riverton and Lander.

### HOW TO MAKE ENTRY.

"All persons making homestead entries in said reservation within two years after the opening are required to pay \$1.50 per acre, but in homestead entries made thereafter, the sum of \$1.25 is to be paid. Fifty cents per acre is to be paid at the time of making the entry, and twenty-five cents per acre annually thereafter until the price provided for has been fully paid. Lands entered under the townsite, coal and mineral land laws must be paid for in amount and manner as provided by said laws.

"Notices of location of mineral entries are required to be filed in the local land offices of the district in which the land is situated, and unless entry and payment shall be made within three years from the date of location, all rights thereunder shall cease.

"In case any entryman fails to make any payments for the land as provided, within the time stated, all rights covered by such entries shall cease, and payments which have been theretofore made will be forfeited and the entry held for cancellation.



## Uncle Sam Is Investing Millions in Wyoming Reclamation Projects.



The Great Pathfinder Dam, North Platte River, which will supply water for the irrigation of 150,000 acres of land in Laramie County.

"Commutation of homestead entry may be made of these lands under Section 2301, R. S., but the parties will be required to pay the price for the land, as fixed by the act.

"After the expiration of five years from the date of the opening, all the lands then undisposed of, except mineral and coal land, shall be sold to the highest bidder for cash at not less than \$1 per acre, and any of such lands remaining unsold after eight years from the time of opening may be sold to the highest bidder for cash, without regard to the minimum limit of price.

"The ceded portion embraces about two-thirds of the land within said reservation and contains approximately 1,150,000 acres."

#### HOW TO OBTAIN A RIGHT TO THE USE OF WATER.

The applicant must survey his ditch line and determine the lands which can be irrigated. Blanks for making application can be secured from the State Engineer's office at Cheyenne, and, when correctly filled out and accompanied by maps, in duplicate, showing the necessary information, accompanied by the filing fee of \$2.00, will be considered by the State Engineer and, if the water applied for is not already appropriated, a permit will be granted. The applicant will be notified of the further proceedings required before final appropriation is made.

If the land for which water is desired has been segregated under the Arid Land Act or is included in water permit granted for a canal already constructed or in course of construction, the applicant must purchase a water right, which includes a proportionate interest in the canal or irrigation system from the company or person holding the permit. If the water is not used for beneficial purposes for a period of five years, the right is deemed abandoned and a new permit may be issued for other lands or for the same land to other parties.

Full particulars in regard to all matters concerning water can be secured by application to the State Engineer, Cheyenne, Wyoming.

## Ranching.

THE ranchman has made Wyoming, and in every county of the state the ranchman is its most prosperous citizen. In the early days of the state, when most of its vast area was open range, great ranches were the rule, but with changing conditions the great ranches are being subdivided and hundreds of homes are now found where formerly miles of open range surrounded the buildings of a single ranch.

The ranch scenes shown in this book may be taken as typical of any of the ranching communities of Wyoming, and there are thousands

of other localities where the business of ranching on a greater or less scale is adapted to the capital of the incoming settler. Every portion of the state is now being reached by railroads, which insure the prompt moving of the ranch crops and live stock, and bring the ranchman and his family in touch with the neighboring towns.

The area of land in Wyoming subject to entry under the land laws of the United States is given at 48,000,000 acres. The mountain ranges adjacent to the ranch lands are covered with the most nutritious wild grasses, which have made the business of ranching possible, and while the great open range is a thing of the past, there is still sufficient grazing for all the cattle which can be profitably handled from the adjacent ranch land. The Wyoming ranchman is adapting himself to the changing conditions of live stock raising, and each year sees improvements along these lines.

The raising of horses is also a branch of the ranch industry that may well be taken into consideration by anyone about to embark in this business. It is a well recognized fact that horses raised at high altitudes have better lungs, stronger bone and muscle and tougher hoofs than those from the lowlands. Wyoming is a horse paradise.

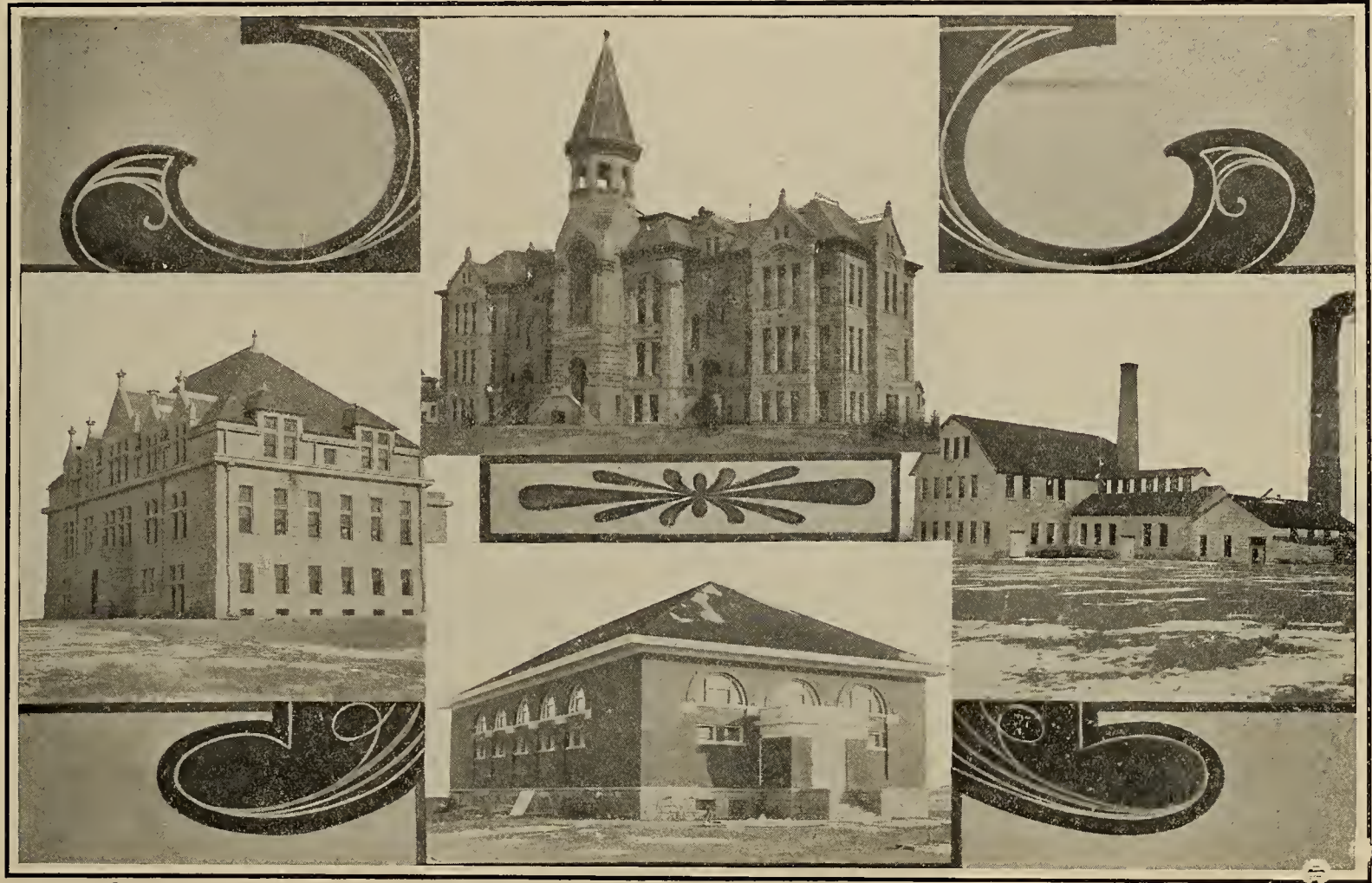
## Horticulture.

THE picture of Ed Young's apple orchard at Lander, in Fremont County, Wyoming, on page 27, shows the pioneer horticultural experiment in this state, and demonstrates the possibility of successfully growing apples and other fruit at these altitudes. On the Laramie Plains, at an altitude of 7,400 feet, Mr. Jacob Lund has an orchard which matures Wealthy apples each year; and strawberries, gooseberries, currants and other small fruits can be grown wherever there are agricultural lands.

The State Board of Horticulture has issued a beautiful pamphlet illustrating the progress and success of horticulture in Wyoming, and it is sent for the asking. Some of the greatest men in the state are actively interested in this very necessary and highly profitable branch of agriculture, and it is certain that in the future Wyoming will be ranked among the hardy fruit producers of the West. There are nurseries scattered all over the state, in nearly every county, and at each county fair there is active competition on the part of the fruit enthusiasts for the place of honor for their products. The common garden vegetables are raised all over the state, and at altitudes less than 5,000 feet those rated as tender, such as melons, tomatoes, pumpkins, squashes, peanuts and sweet potatoes, are grown readily and with entire success.



*The Schools of Wyoming Compare Favorably with those of any Other State.*



Buildings of the University of Wyoming, at Laramie.

The best horticultural sections of the state are the low altitude lands and the protected valleys of Big Horn, Laramie, Johnson, Sheridan and Fremont Counties.

Successful horticulture at these altitudes offers a wonderful field for men and women who understand the business and are willing to adapt themselves to the new conditions which they will find prevailing here. For such there need be no doubt of the prosperous outcome of a venture in this most inviting field.

## Health.

WYOMING is noteworthy for the good health that prevails among its people. The climate is similar to that of the mountain region of Italy, and is not, as many erroneously suppose, extraordinarily severe in winter. The dry air is invigorating, and there are few climates more bracing, healthful or pleasant than that of this mountain region.

Hot springs, whose medicinal and curative properties are amply established, abound throughout the state. The great Thermopolis Hot Springs in southeastern Big Horn County, shown on page 37, are the property of the state, which maintains a bath house absolutely free to all those who wish to avail themselves of the curative properties of these wonderful waters. These springs are reached by the Burlington railroad, and there is ample accommodation at Thermopolis for all comers, as well as ample camping ground for those who wish to camp out at the springs. These springs are destined to become as well known and popular as the famous Hot Springs of Arkansas or the Carlsbad waters of Europe. Thousands visit them now, and as their fame spreads throughout the West, the number is increasing yearly.

In Wyoming the heat is never intense. In the hottest summer weather it is but a step from the heat of the sunshine into the shade which is always cool. Sunstroke is unknown. The air in winter is clear and sharp, but easily borne and even pleasant. All over the state—except at high altitudes—one may, even in midwinter, sit in comfort in the sunshine in any sheltered corner. In the shade there is the tingle of northern cold, and heavy clothing is none too warm. This cool but sunny air acts as a tonic and aids nutrition. The brilliant and continuous sunshine, so dear to the true Westerner, is often mistaken by Eastern people to mean unseasonable heat, but really has nothing to do with the temperature. We offer the invalid, not a climate of balmy warmth, but, better, one in which the bracing cold is flooded for more than three-fourths of the day with bright sunshine.

## Live Stock.

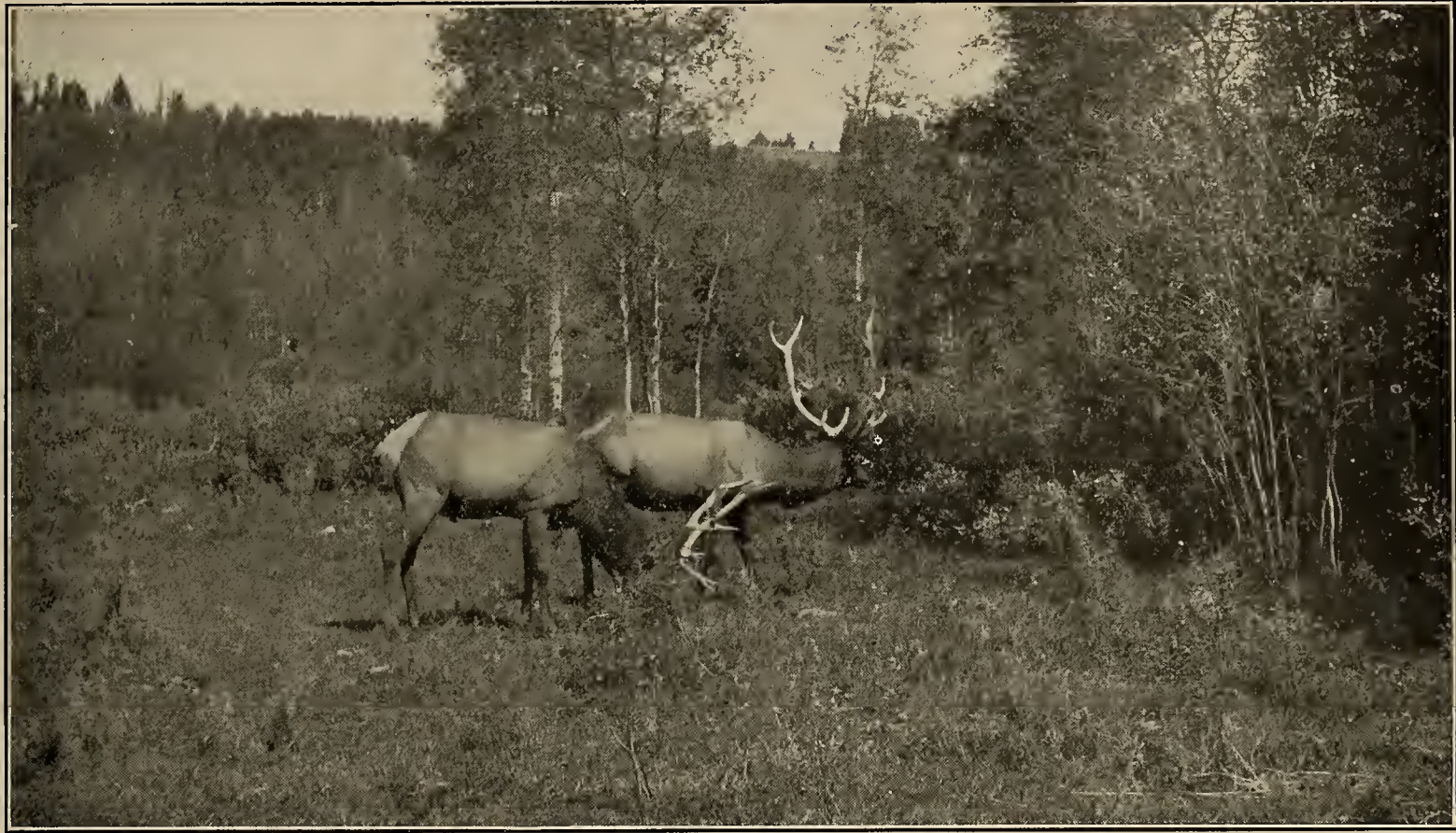
THE live stock industry of Wyoming, which for a long time was its only industry, has a history as varied and romantic as a Sixteenth Century tale. When the country now comprised in this State was first discovered, a luxuriant grass covered the prairies, upon which nothing but buffalo and wild game grazed. Her first herds were gathered and reared by men who preceded the first attempts at actual settlement of the territory. Lying in the pathway of that great migration to the Pacific coast, which began in the middle of the past century, her territory was necessarily traversed by countless long trains of ox teams, many of which, through accident or disease, were destined never to reach their journey's end. Sick, injured, footsore and poor, these animals were abandoned to live as best they might, or become a prey for the wild animals of mountain and plain. That many of them lived through the winter following and were fat enough for beef in the early springtime proved a revelation to the man accustomed to long and expensive winter feeding, and forced his attention to the fact that our mountain grasses must possess nutritious qualities of marvelous worth. To raise cattle, horses and sheep was, for our earliest settlers, an easy matter, but to keep them was quite a different proposition, for the Indian had little respect for the rights of ownership, and no horse was safe beyond the reach of a bullet from his owner's trusty rifle. When the white man came to stay he brought vast herds of cattle that thrived on the strong and nutritious grasses of the open range. Fast following these early days of settlement, of danger and accumulation, came the "boom" in the cattle business during the '80s, marked by the investment of millions of dollars by men who knew nothing of the business in which they so recklessly embarked. The period of unwarranted speculation, fancy prices and extravagant waste was of short duration, and, naturally enough, was followed by rapid depression of prices and the consequent failures of the inexperienced.

Following this appeared the ranchman of moderate means, having smaller herds of cattle, who had learned by bitter experience that feed must be provided for severe winters. Thus ranches were settled and irrigated—alfalfa, hay and other feed provided—rendering the business that was formerly so precarious a safe and steady avocation, and one that is rapidly giving our people wealth and independence.

The requisites for success in the business are a few cattle, sheep or horses, and attention to their wants under the conditions of the country and climate. The man who can do this for a few years will, with common prudence, find himself independent of the world, and his old age may be spent in peace and with plenty.



# Wyoming is the Big Game Country *of* the World Today.



Wyoming Wild Elk.

Every year the big game country of Wyoming is visited by more sportsmen and each year sees more enthusiasts added to the loyal supporters of her just game laws. Bear and elk furnish all the sport needed and the fishing is fine throughout the State. Write for copy of Game Laws.



## Sheep.

IN 1907 there were over five million sheep in the state, valued at \$17,000,000. The Wyoming flockmasters have been keenly alive to the importance of improving the quality of the wool and the necessity of early maturity in mutton. Hence we now find Wyoming lambs topping the market and in demand everywhere. Winter feeding of lambs is becoming an important branch of the sheep industry; experiments are constantly being made to improve the nutritive value of the feed supplied, those conducted with a view to ascertaining the food value of field peas being especially successful.

Lambs fed on alfalfa hay (one of Wyoming's staple agricultural products) varied with peas or grain of some sort, in one hundred days of winter feeding can be made to weigh eighty to ninety pounds; and mutton so produced is considered by epicures the best on the market.

Lambs fattened on alfalfa, barley, pease or other rations, but especially on pease, are money makers to the feeder. Pea-fed lambs always top the market. In 1905-06 four carloads were fed sixty-five days on pease. They were allowed to forage the crop for themselves and when shipped to St. Joseph they topped the market at \$7.45.

The same statements will hold true for hogs.. *And they are free from cholera.*

The one thing the eastern farmer must bear in mind in regard to stock-raising and stock-feeding on these plains is that no shed or barn is required, as in the moist countries farther east. Lambs and pigs are dropped often in mid-winter, and there is no such thing as building a fire in the hog house, even though the time is January.

Thousands of sheep and stock of all kinds are raised on the Laramie Plains, and it will be many years before enough farm produce can be raised to fatten this stock. A ready market, then, will always await the farmer.

Wyoming leads all of the Western states and territories in the price per head of its sheep, and leads every state in the Union in the total value of its sheep, the number and value of its lambs, the amount and value of its wool clip, and the average weight of fleece produced.

The wool at fifteen cents a pound a little more than pays all the expense of running the sheep for the year, so that the increase and mutton are the accumulated net profits. With wool at 16-20 cents per pound as at present, there is a handsome profit on every head in the State.

The State Veterinarian has ever a watchful eye upon the flocks of the state, and they are maintained in a high state of health, consequently are profitable to their owners. Sheep are now run in every county of the state and form the foundations of some of the greatest fortunes which have been built up in Wyoming—many of them by men who had but a

very small capital to begin with. For men of this class, who are not afraid to work, there is no better field for profitable investment than is now offered in Wyoming sheep.

## Cattle.

THE wonderful native grasses, which cover the plains of Wyoming, made the cattle business possible in the early days, and the cattle business made the State of Wyoming a reality. In former days the free range made vast herds of cattle a profitable investment, but with the passing of the open range, the improvement in the grade of stock was a necessity and many herds of the highest grade of cattle and other live stock are now maintained throughout the state.

Wyoming can grow better beef at a less cost than almost any other section, for the reason that land values are very low, as compared with land values of other states. Stock raisers are rapidly coming to appreciate the importance of winter feeding, and as a consequence hay and grain production is receiving more attention every year. Moreover, alfalfa, hay and oats combined form a perfect ration for the correct and complete development of bone, muscle and flesh, while our natural buffalo grass and bluestem hay excels the famous bluegrass of Kentucky. Under irrigation these are cheaply and quickly grown, while our cloudless summer skies permit us to harvest these crops so as to retain all nutritive properties.

The dry climate of the winters makes the country unequaled for stock feeding. In December, 1904, one of our foremost ranchmen, Mr. E. J. Bell, shipped a carload of grass-fed steers to the International Live Stock Exposition. These cattle were originally entered in the hay-fed class, but the officials decided that they were too good for this class and they were transferred to the class of corn-fed steers. Here Funk Bros. took the first and second prizes and Mr. Bell's grass-fed carload carried off the third prize. They sold for \$7 and weighed 1,480 pounds. *Remember these cattle did not know what grain was.*

The prize steer at the recent Stock Show at Denver was four years old and weighed 1,850 pounds after being fattened for forty days on alfalfa, Bald barley, oats and stock beets. Add to this Canadian field peas and there is a fattening ration second to none; each of these can be produced here at a small cost for the production of the finest beef at home.

Blood and feed, with ideal natural conditions, in a land where disease is unknown, enable us to defy the world in the breeding of live stock. Our winters are mild; cattle graze in the fields during the whole year.

Wyoming cattle are healthy, and the state exercises a rigid supervision over all incoming herds. All beef breeds do well and show a marked



# Wyoming has 25,000 Wild Elk and Other Big Game as Well.



Mountain Sheep Above Timberline.

A hunt in the big game country of Wyoming will make a new man of the man of affairs, who is hard at it all the year round in the cities, and will give him more to think about for the rest of his life than any other experience could possibly convey. Try it, Mr. Busyman.

improvement in this high altitude. Experiments made by our more progressive ranchmen have demonstrated conclusively that steers can be hay-fed and matured during the winter with great profit. There is today no better opportunity for money-making than producing beef in Wyoming.

## Horses.

IT has been proven beyond question that horses raised on the foothills and mountains, in the pure light air of an elevation of from 5,000 to 10,000 feet, have better lungs, stronger and better developed bone and muscle, and tougher hoofs, than horses from any other country. This is borne out by the fact that not only the United States Government, during the Spanish war and since, but the English Government, for service in South Africa, have purchased as many thousand head of horses in Wyoming as could be obtained.

No horse in the world can compete with the Wyoming horse in endurance of all kinds of hardship to which horse flesh is subjected by man. This is a broad statement, but we make it without fear of refutation; every horseman and horse in the State stands ready to back it up.

Embracing about 98,000 square miles of territory, nearly every acre of which is clothed in a mantle of the most nutritious grasses and sage brush browse, Wyoming presents a territory for grazing purposes 40 per cent larger than is found in all the eastern states combined. Add to this vast food supply the most delightful climate in the world, with cool summers and dry, mild winters, and it is but little wonder that Wyoming has been called the "Stockman's Paradise," and that it has become an important factor in supplying beef, mutton and wool to the eastern and western markets.

## Swine.

SWINE do remarkably well in our State, hog cholera being unknown, and it is said that young shoats born in our high altitude are not liable to contract the disease when shipped east to be finished on corn. Swine do well the year around on alfalfa. In the summer they are turned in to the green alfalfa fields and in the winter fed on the dry hay. The best of pork can be produced very cheaply on a combination feed of alfalfa, roots, small grain or peas.

Today Wyoming imports a large proportion of the salt pork, bacon and ham consumed by her citizens, amounting to tens of thousands of dollars' worth each year. The freight rate from the eastern market is very high, and this meat could be produced in Wyoming with great profit.

## Minerals.

AS hinted elsewhere, the mineral industry of Wyoming is yet in its infancy and the mountain ranges throughout the state offer a wonderful field to the prospector. Gold and silver, copper and iron and the lesser minerals, such as sulphur, asbestos, building clays and building stone of every description, have been demonstrated to exist in commercial quantities in many localities. So important is the future of the mineral industry considered by the people of the state that the School of Mines of the University has recently been provided with new and commodious quarters, and a large sum has been spent on machinery, tools and equipment.

It is a curious fact that the first gold discoveries of the West were made in Wyoming, and for a time the Sweetwater Mines, as the South Pass Gold District was then known, were famous the world over. Millions of dollars were taken out of the placers, and the mining camps flourished with all the old-time romance.

The placer mines were followed by discoveries of the lode mines, and the names of the "Miner's Delight," "Carissa" and "Big Atlantic" became household words throughout the country. New discoveries in other states soon attracted the floating population of the early camps, and for many years these gold mines have lain practically idle.

Now they are being opened up by the men of large capital. Improved modern machinery, new plans for saving all the gold, have succeeded the wasteful ways of the old "flush times," and Wyoming is once more on the high road to be a producer of precious metals—a result toward which Albany County will contribute the output of the rich Douglas Creek and other placers, and Carbon, Fremont, Big Horn and Uinta Counties will add the richness of their now undeveloped mines.

## Copper and Iron.

THESE are the two principal metals mined in the state today. In 1908 Wyoming produced 4,350,000 pounds of copper and 675,000 tons of iron ore. These came from very small spots on the mineral map of the state and active mining is in progress in nearly every mountain range within her boundaries. Until the last ten years but little active mining had been attempted, the undeveloped mineral possibilities of the state having been neglected for the more apparent fortunes in live stock and kindred industries. Now the situation has changed, and the whole state is being actively prospected, with some surprising results. In



## *The Big Horn Basin Coal Fields Have Simply Been Touched Upon.*



A Flashlight Photograph of a Fourteen-Foot Vein of Coal in the New Gebo Coal Mines at Kirby, Big Horn County.

This is the first time the coal of this field has found a general market, and the great fields of the Basin will in the future rank with the great Rock Springs field in Southern Wyoming. Here the coal is a high grade lignite and a good steam coal. The Burlington Route has opened it up and other mines will follow.



nearly every county may be found a constantly increasing number of mining camps, and each year sees new producers of metal entering the lists.

During the past few years copper in commercial quantities has been found in nearly all of the thirteen counties of the state. Development work is being actively pushed in all parts of the district called the "Grand Encampment country," in Carbon and Albany Counties, in which lie the famous Ferris-Haggarty and Doane-Rambler mines. Albany County boasts the Great Rambler mine, containing copper in almost all its known forms. Big Horn and Fremont Counties show prospects which are believed to be of great promise.

Production has been low owing to almost impossible transportation conditions which are gradually being overcome by the new and old railroads throughout the State. The only smelter is at Encampment, where the Penn-Wyoming Copper Company, controlling the Ferris-Haggarty and Doane-Rambler mines, has built 44 miles of railroad from Walcott on the U. P. R. R. to Encampment, and ran the greater part of the year, but are now doing development work only in their two mines for a greater record next year. Several new strikes were made in the Encampment district, that of the West Virginia-Wyoming Company in Battle Basin being the most notable, as it proves the further extension of the contact ores of the region and lights the way for others.

After some six years of expensive experimenting, the Rambler Mining Company, controlling the Great Rambler Mine, in the Medicine Bow Range in Albany County, have succeeded in separating the platinum and palladium which occurs in commercial quantity in their copper ores, and during the fall of 1908 have had a force of men reopening the property. The building of the Laramie, Hahns Peak and Pacific R. R. from Laramie to the North Park coal fields brings transportation within a few miles of this and the adjacent mines on Lake Creek and Douglas Creek, as well as the Shawnee and other properties on French Creek and the Snowy Range, where heavy copper indications are being quietly developed and proven.

The Williams-Luman Mine at Depass, on Copper Mountain in Fremont County, is opening up the largest body of copper ore yet discovered in Wyoming. Little of this is heard about, as no stock is sold and none for sale. Two thousand feet of development work has shown a huge ore body, eighty feet wide and length not proven. At 485 feet depth, copper oxides and metallic copper are noted, as at surface, and the accompanying gold bearing streak of some six or seven feet is much in evidence. A gas producer plant to use lignite has been installed for additional power.

The Boysen power dam in the Big Horn Canon at the west end of Copper Mountain, is being relied upon for power for the whole adjacent mining territory, as well as the nearby towns, and as all the difficult work of

installation is practically completed, the plant should be in operation by the spring of 1909.

Copper prospecting is proceeding over a greater territory than ever before, and more genuine development work on better showings is the result of this systematic work. It is being more generally recognized that copper is the main mineral to be found in Wyoming and the low grade of the ores, conditions of occurrence, and method of development are being better understood, with marked improvement in results.

Second to those of no state in the Union are the deposits of iron ore. Prospecting along this line has been very limited and only iron districts near the railroads have received any attention. The only districts where mining has been carried on are Hartville, Rawlins and Seminoe. The soft ores from these camps make an excellent paint, and hard ores also exist. These ores are much used by smelters as a flux.

Production has gone on steadily in the Colorado Fuel and Iron Company's mines at Sunrise, Laramie County, and the total for 1908 will exceed 1907. Additional prospecting in this vicinity has shown a greater area than this deposit was supposed to cover, and the presence of iron operators from eastern fields, bidding for lands here, indicates that other mines and properties again have a chance of being opened up. The Bradley Peak and Rawlins deposits, in Carbon County, have also been under inspection, but nothing definite has been given out for publication. Prospecting for iron is also going on in other sections of the State, and samples submitted indicate that other commercial iron areas will be opened.

No other field offers finer opportunities for mining investment than this long-neglected State of Wyoming.

## Asbestos.

THIS will be an important item in the mineral reports of Wyoming for years to come. Commercial Chrysotile Asbestos has been practically developed this year by the North American Asbestos Company on Casper Mountain, Natrona County, who will erect a mill in the spring of 1909 and begin commercial production at once. There is no doubt as to the quantity and quality of the product; the fiber shows up to four inches in length, two inches is not uncommon and fiber an inch long is common. Practical tests have amply demonstrated the spinning and workable qualities of the fiber, though at first only the rougher grades will be regularly produced. The asbestos occurs in serpentine in granitic and schist, showing up to two hundred feet wide and solid asbestos rock was shown in the main workings, twenty feet wide and the full width not cut at that time.



*The Indians Called this Hill "Mateo Tepee."*



The Devil's Tower, a Mass of Basaltic Rock Over 600 Feet High,  
in Crook County.

This is the most prominent landmark of Northwestern Wyoming, as it is seen for many miles in every direction and is but one of the many practically unknown natural curiosities of the Black Hills borderland.

Asbestos in its crude state, as found imbedded in the original rock, exists in either surface or underground veins. It appears like a woolly outgrowth of the rock, when weathered by exposure to the atmosphere. Chemically, it is known as "hydrous silicate of magnesia." Geologically, it is found in a "metamorphic eruptive rock." Commercially asbestos is found in the variety of rock called "serpentine" and is known as "crysotile."

This crysotile occurs in parallel layers and is quarried or mined by blasting, just as ordinary rock. The mineral varies from a yellow or brownish color to light and dark green, and when separated and ready for market is wavy and silky in texture, while pearly white in color. It is separated by hand cobbing or by machinery, the process being very simple. The material is then easily spun or woven into texture, when it becomes commercial asbestos and is ready for shipment.

## Coal.

WYOMING coal is known from one end of the country to the other, and it was this coal which made the first great trans-continental railroads a commercial possibility. The coal production of Wyoming has grown from 35,000 tons in 1868 to over 6,000,000 tons per annum in 1908. There are over 20,000 square miles of known coal land in Wyoming—a greater area in proportion to its size than is found in any other of the Rocky Mountain States—and coal mines are actively operated in twelve out of the thirteen counties. The kinds of coal vary from a pure lignite to a high-grade bituminous variety. The best grades are low in sulphur and ash, and are excellent fuels for locomotives, general steam-making, domestic purposes and gas production. Fine coking coal is mined at Cambria, Weston County.

As new railroads push out into the hitherto neglected portions of the state, new coal fields become available and new fortunes are being built up from the black diamonds of Wyoming.

## Wyoming's Oil.

THERE are nineteen well-defined oil fields in Wyoming, which produce oil of an acknowledged superior quality. In each of these oil is flowing from springs, or there are thick bands of oil sand exposed. The greater number of these fields are situated in the central portion of the state, but there are fields in the northeastern portion, in the southwestern part, and in the northern central region.

The oils produced by these fields will yield oil of every known grade, from an illuminating oil of the highest quality, secured in Uinta County, where the wells shown in the illustration are located, to the famous lubricating oils of Salt Creek, in Natrona County, which have not the smallest trace of illuminating oil among their constituents. It is in the latter field that the greatest progress has been made in development work, and the refinery at Casper turns out a varied assortment of lubricants in commercial quantities.

The following are prominent fields:

**THE POPO AGIE OIL FIELD.**—This field is situated ten miles southeast of Lander, Fremont County. It covers several townships and extends north to Lander. The history of this field is far more interesting than any other oil field. It was discovered by Bonneville in 1833, and is the place where the first producing oil well was drilled. From the date of Bonneville's visit up to 1867 the oil spring was unknown, except to the hunter or trapper, who frequented the locality to secure the oil for medicinal, lubricating, illuminating and other purposes. There are now thirteen flowing wells, with a capacity each of 200 barrels per twenty-four hours; owned by the Belgo-American Drilling Trust, as are also the lubricating oil wells situated on Salt Creek, with the refinery at Casper. The oil appears black, is reddish brown by transmitted light and has a strong, disagreeable odor.

In refining the products are gasoline and kerosene, about 35-45 per cent, and the balance lubricating oils and asphaltum. The oil is of heavy asphaltum base and suitable for high grade fuel, tests giving 14,571,000 foot pounds of energy per pound of oil. One pound of this oil will convert 19.40 pounds of water at 212° F. into steam.

**LANDER AND SHOSHONE OIL FIELDS.**—The Lander field joins the Popo Agie on the north, and the Shoshone joins the Lander on the north, extending into the Wind River Indian Reservation. Drilling is now going on near Lander for wells to supply the Wyoming and Northwestern R. R. with fuel from these fields, tests on the engines having proven very satisfactory.

**SALT CREEK OIL FIELD.**—This is the producing field of Wyoming mentioned in the beginning of this article and lies fifty miles north of Casper, in Natrona County. There are fourteen producing wells, eight of which have been pumped for ten years and show as much oil as ever; the average depth is about 800 feet and there is considerable pressure.

The oil is the finest natural lubricant known and contains not a trace of illuminating oils.

Its remarkably low congealing point and high fire test, combined with its great viscosity and freedom from tarry and gumming products render it especially valuable in railroading, and it is used on a number of western roads today.



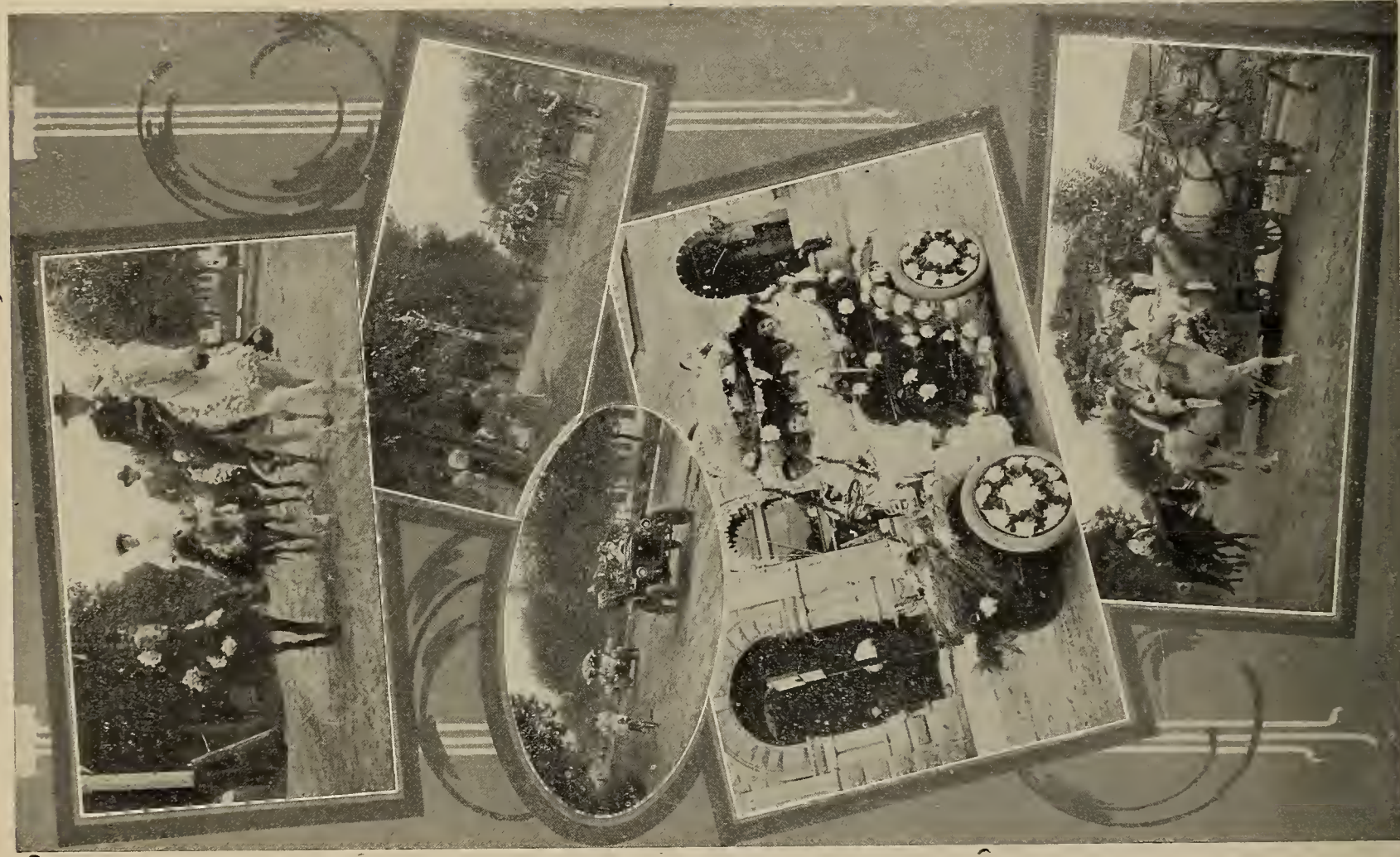
This Bridge is a Beautiful Natural Structure.



View of the Natural Bridge, a Wonderful Rock Formation Spanning  
La Prele Creek, near Douglas, Converse County. Just Above  
this Bridge the Immense Dam of La Prele Irrigation  
Company is Being Constructed.



Wyoming People Know How to Enjoy Life.



Some of the Beautiful Scenes During the Carnival at Sheridan, Wyo.



## There are Nineteen Well Defined Oil Fields in Wyoming.



View of Oil Fields near Evanston, Uinta County, which produce fine illuminating oil free from lubricating constituents. Other fields are situated in Fremont, Converse, Big Horn, Weston, Crook, Sweetwater, Natrona, Johnson and Carbon Counties, where all grades of oil are found.

UINTA COUNTY OIL FIELDS.—This district includes several fields—Bear River Basin, Round Mountain, Fossil, Spring Valley, Twin Creek, Carter and Hilliard—and has many natural advantages over the other districts on account of its proximity to transportation, the Union Pacific Railroad, and the points of distribution, Salt Lake and Ogden.

The cold test of the crude oil is 58° F., and the amount of crystallized paraffin that was present in the lubricating stock is 18.5 per cent.

THE NEWCASTLE OIL FIELD is located in the vicinity of Newcastle, county seat of Weston County, on the Burlington Railroad.

This petroleum is similar in composition to the Salt Creek oils and belongs to the class of heavy oils, and is not suitable for the production of gasoline or kerosene, although they can be obtained from it. Its chief value will be for lubricating and for fuel purposes. It is, in its natural state, an excellent lubricant, has a high gravity and low cold test, a high viscosity and shows no paraffin or asphalt.

THE BONANZA OIL FIELD and the COTTONWOOD OIL FIELD are in close proximity to each other in Big Horn County, near No Wood River, a tributary of the Big Horn. Active development work is now being carried on in this district, a very fine grade of oil having been found.

THE DOUGLAS OIL FIELD is situated a short distance south of Douglas, county seat of Converse County, elevation 5,000 feet. The quality of the crude oil in this section is exceptional and will work up into remarkable lubricating oils.

THE OIL MOUNTAIN FIELD is situated twenty-five miles west of Casper, Natrona County. This petroleum is principally valuable for lubricating purposes, although the most of it could be worked up into kerosene for open lamps, such as miners use.

THE DUTTON OIL FIELD is situated partly in Fremont County and partly in Natrona County. Many oil springs are found here and natural gas is quite abundant. There is practically no development in this district. The oil has a gravity of .927 (21° B.).

THE BELLE FOURCHE OIL FIELD is situated about fifteen miles north of Moorcroft, on the Burlington Railroad, in Crook County. In the early history of the discovery of gold in the Black Hills, needing lubricating oil for the machinery, men were employed in this field in collecting oil from the springs, which was transported by wagon to Deadwood and there sold for \$28 per barrel.

THE POWDER RIVER OIL FIELD is located on the South Fork of Powder River, sixty miles northwest of Casper, county seat of Natrona County; fifty miles south of Buffalo, county seat of Johnson County. There are many oil springs in this field. This is one of the best fields in Wyoming; the structural features are ideal. This petroleum is heavy and black; the odor is slight, resembling common kerosene, and in general character is similar to Salt Creek oil and the Popo Agie oil.

THE RATTLESNAKE AND ARAGO OIL FIELDS are on the northeast slope of the Rattlesnake Mountains in Natrona County. Here is found asphaltum in sufficient quantities for commercial importance, if it were not for the lack of transportation.

DEVELOPMENT.—The successful and profitable development of many of the oil fields depends largely upon the construction of new railway lines—an investment fully warranted by this resource—but there are a great many opportunities presented in many of the fields which are adjacent to present railway lines for profitable and highly remunerative development.

Convenient access to railroad transportation facilities is indispensable to the successful and profitable working of an oil field, and it is the lack of this that has hitherto prevented the greater development of the Wyoming fields. With the increased activity in railroad construction being manifest at present, this hindrance is disappearing, and Wyoming oil is becoming a factor in the market. It is certain that a bright and prosperous future is before this industry.

Wyoming's infant oil business offers great opportunities to the right man.

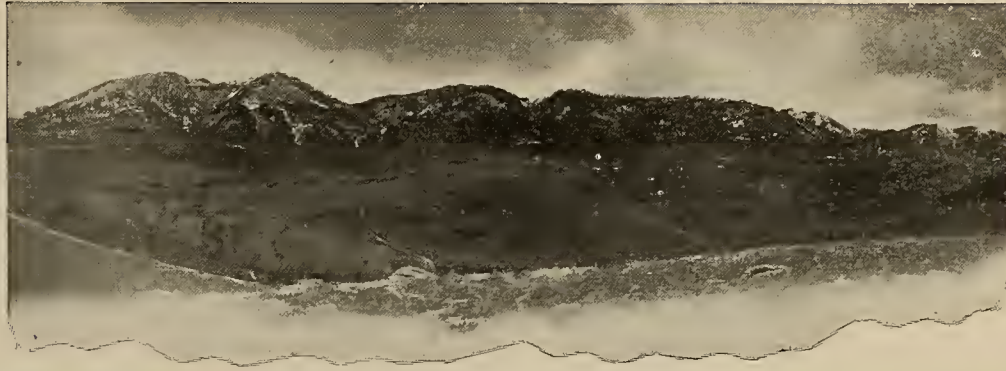
## Natural Gas.

ASSOCIATED with the oil fields throughout the State are numerous natural gas horizons. The gas pressure in the oil wells near Lander is very great and gas escapes are noted at or near most of the oil springs. At Brenning Basin, near Douglas, in Converse County, a flow of gas has been struck in several wells, at a depth of 500 feet, and the gas has been piped and used for fuel and light in the vicinity, a pressure of 300 pounds per square inch having been noted. Near Greybull, in Big Horn County, an immense gas reservoir has been tapped and the well is being capped at this time. At Byron, thirty miles northwest of Greybull, there are seven wells which show natural gas in commercial quantities, and also at Garland, seven miles west of Byron. In the eastern part of Fremont County there are two wonderful natural gas escapes. Prospectors have dug shallow shafts and curbed them with logs; the shafts are partially filled with water and the gas escapes with such violence as to cause the water in them to boil as though in a cauldron. Throughout the State there are numerous anticlinals that are apparently not associated with the oil districts, where large flows of gas may be looked for.

Until recently natural gas has not received much attention, as there was but little local demand or use for the product, but with the changing industrial conditions throughout the State, this will be a valuable asset within a few years.



# Wyoming Chrysotile Asbestos is *of* the Finest Quality.



Panorama View of Casper Mountain,  
Natrona County.



Specimens of Crude Asbestos Taken from De-  
posits on Casper Mountains of Wyoming.



Fiberized Asbestos (in Marketable State) Taken  
from Casper Mountain, Wyoming.

## Education.

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WYOMING was the first state to grant equal political rights to men and women, and it is but natural that the subject of education should receive the most profound attention. The schools of Wyoming are second to none, and in each county of the state every facility is extended to the children, however isolated are their homes, to secure an education. Schools are provided where they are even a very small number of pupils, and in all large towns are good high schools, which fit the young people for the State University.

The University of Wyoming, located at Laramie, is an admirable institution, which offers splendid courses in literature, science and art, as well as in mining, mechanical and irrigation engineering, agriculture and commerce.

The University is founded and maintained for the purpose of being as useful as possible to the people of Wyoming, and the various regular and special courses carried on under the direction of the faculty are of the greatest practical benefit.

Bulletins are issued by the University from time to time on topics of general interest to farmers and others, and are sent free upon request to all who will apply for them.

## Scenery.

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THE average traveler who considers himself well posted will gaily affirm that Wyoming is devoid of scenic attractions, but in reality there is no region in the world which can show scenery of the same grandeur as that of Northwestern Wyoming, south and east of Yellowstone Park. The Park itself is too well known to need description here, but the region surrounding it offers the most wonderful series of views to be found in the world today, and with the rapidly increasing railroad facilities of this region these are becoming known so widely that each year sees a constant stream of tourists directing their steps toward this Switzerland of America.

The National Park can be reached by wagon routes which enable one to make delightful camping trips through beautiful and diversified scenic country. The Cody Gateway of the Burlington Route is a wonderfully picturesque trip over a splendid new government road covering the fifty miles from Cody to the Park. The tally-ho coaches make stops at Colonel Cody's famous hotels.

Guides and camping outfits can be had at Cody.

Another plan is for the tourist to outfit at Lander on the Wyoming & Northwestern Railroad, taking his choice of several routes. From Green River or Rawlins, on the Union Pacific, a wagon trip may be arranged through the most wonderful wild scenery on the continent, and for the man who wants a good long camping trip, and a rest from his usual occupations, this latter trip is recommended. Any of them will be a wonderful experience, the impressions of which will last a lifetime.

## Hunting.

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THE Jackson Hole Country of Western Wyoming is the greatest big game hunting ground in the world. The State Game Warden is authority for the statement that there are 25,000 wild elk in the state today. Deer are found in every mountain range, and antelope are still running wild wherever the open range remains.

To describe each locality would require pages instead of a few lines. There is open season all the year round for fishing, but big game and game birds are protected under stringent game laws, which are strictly enforced under the direction of the State Game Warden.

The open season is as follows: Grouse and sage chickens, August 1st to September 15th; deer, elk, antelope and mountain sheep, September 15th to November 15th; snipe, plover, ducks and geese, September 1st to May 1st.

The big game districts may be reached from points along the Union Pacific; from Lander, in Fremont County, the present terminus of the Chicago & Northwestern, or from Cody or Thermopolis on the Burlington.

In order to hunt large game or game birds, a hunter must purchase a license. To an elector of Wyoming, or a soldier or sailor stationed at a Government Post for the year past, a license is issued upon payment of \$2. For a non-resident the fee is \$5 for a gunner's license permitting the hunting of game birds, and \$50 for a hunter's license for the killing of game animals. Non-resident hunters must be accompanied by a licensed guide when hunting game animals.

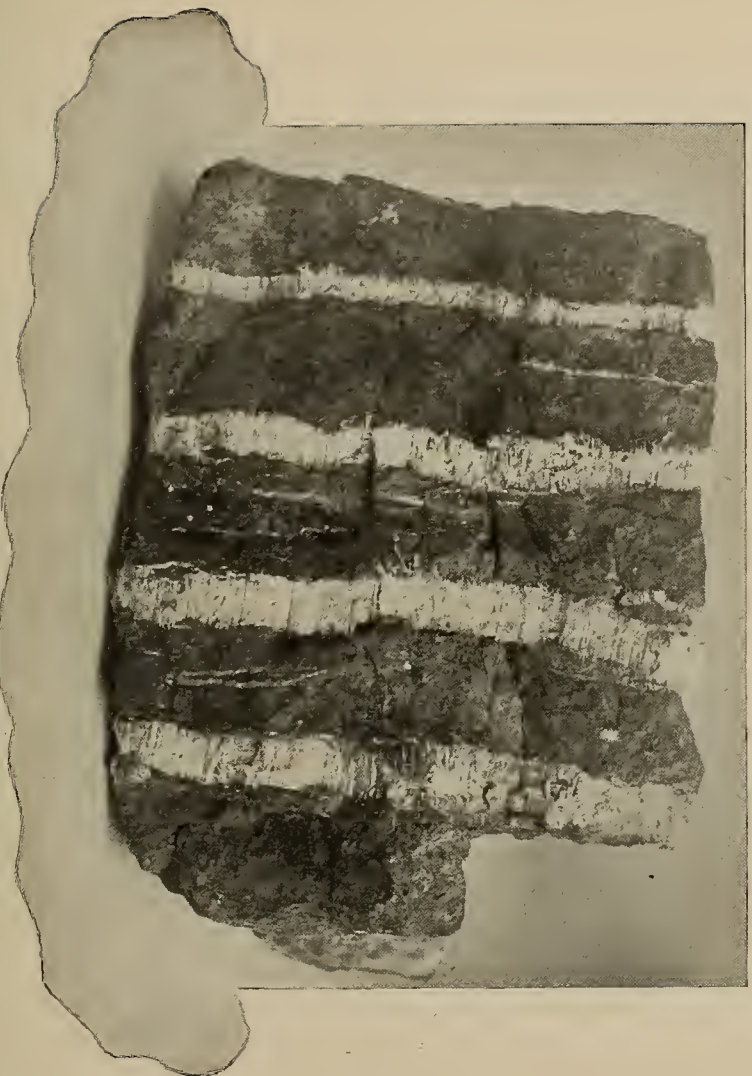
During the open season licensed parties may kill not to exceed one elk, two deer, one antelope and one mountain sheep between September 15 and November 15, and not more than twelve game birds in any one day. The barter or sale of any part of the animals or birds above mentioned, or the possession of more than the specified number, is pro-



# Mineral Deposits of All Kinds Are Found.



Soda Refinery at Green River, Sweetwater County, which utilizes a part of a natural resource which has been known for many years, but is now active. Soda lakes exist also in several counties and there is enough soda here for all purposes for many years to come. Epsom salts are also found in lakes.



Actual Photograph of Serpentine Rock, Bearing Asbestos Seams, Taken from the 38-Foot Shaft, Property North American Asbestos Co., Casper Mountain.



hibited under penalty of heavy fine or imprisonment. License must be carried and shown upon request. Game killed by licensed non-resident hunters may be shipped from the state, upon a certificate from a justice of the peace stating that such animals were killed according to law. It is unlawful to sell any part of any wild animal, hides, horns or tusks, or to use dogs for the purpose of coursing or running the animals above mentioned. Taxidermists cannot buy hides, horns or any part of game animals or birds, but mounted birds or stuffed heads and horns lawfully killed may be shipped within or without the state.

## Fishing.

"We had determined on a feast, and trout were to be its daintiest dainty. We had waited until the confusing pepper of a shower had passed away and left the water calm. We tossed to the fish humbugs of wool, silk and feathers, gauds such as captivate the greedy or the guileless. The trout, on the lookout for novelty, dashed up and swallowed disappointing juiceless morsels, and with them swallowed hooks. Then, O Walton! O Davy! O Scrope! ye fishers hard by taverns; luxury was ours of which ye know nothing. Under the noble yellow birch we cooked our own fish. We used our scanty kitchen-battery with skill. We cooked with the high art of simplicity. Where nature has done her best only fools rush in to improve. On the salmonids, fresh and salt, she has lavished her creative refinements. Cookery should only ripen and develop."—Theodore Winthrop.

THERE is no better trout fishing than that afforded by the streams of Wyoming. The largest rivers and the smallest mountain streams alike teem with fish life. Trout have been caught weighing as much as thirteen pounds and many have been caught weighing more than five pounds. These rare beauties are the exception, however—the hope that keeps the angler keyed up to the highest pitch of expectancy while he is landing basketsful of trout just right for the pan. As many as four varieties of trout have been taken from a single hole in our mountain streams—the sporty rainbow, the Eastern brook, the German brown and the native.

In addition to trout, some of the streams near and in the Yellowstone National Park contain grayling and in the North Platte River there are endless quantities of pike and some cat-fish. The fish of its

streams adds no little to the food supply of the state, as well as to the pleasure of its citizens.

What rare enjoyment is that furnished by the gentle art! With rod and creel the worn-out business man can drive care away and win back the blossom of youth and the appetite that he used to have on the farm. In Wyoming there are long reaches of streams upon which camping is permitted without let or hindrance, where parties may commune with Nature and drink of the life-giving ozone of the mountains. The tang of the pine forests gives zest and the wild scenery lends a charm that one never forgets and which calls one back year after year. It is the call of the wild.



Trout Fishing in Northwestern Wyoming.

Come to Wyoming, the Angler's Paradise.



Agricultural Exhibits at County Fairs are Unsurpassed Anywhere.



A bit of the exhibit of Laramie County at the State Fair, Douglas, 1908, showing the agricultural possibilities of Southeastern Wyoming.

## Just a Few Brief Facts About the State.

Area, 97,890 square miles.  
Mean temperature, 44 degrees.  
Finest trout fishing under the sun.  
Peerless in its educational facilities.  
Area of coal land, 20,000 square miles.  
Wool clip for 1907 worth \$12,000,000.  
Cattle in 1907, 700,000, worth \$14,000,000.  
Mean elevation, 6,000 feet above sea-level.  
Area covered with timber, 10,000,000 acres.  
Highest grade of soft coal known to man.  
Lofty mountains, rolling plains, vast plateaus.  
Population (estimated), July 1, 1907, 120,000.  
Tons of stream tin have been mined and sold.  
Five million head of sheep, valued at \$17,500,000.  
Iron, copper and coal enough for a vast empire.  
Father of modern irrigation law and the reclamation act.  
Finest natural plaster on earth, manufactured at Laramie.  
Foremost in the application of the Carey Desert Land Act.  
Area subject to irrigation and cultivation, 10,000,000 acres.  
Nutritious grasses, furnishing abundance of feed for live stock.  
Great opportunities for making money in sheep, cattle and horses.  
Greatest wonderland in the world, the Yellowstone National Park.  
All the materials necessary for the manufacture of the finest glass.

Coal mines are being operated in all the counties of the state save one.

Area subject to entry under the land laws of the United States, 48,000,000 acres.

Source of the Columbia, the Missouri, the Colorado, the Grande and the Platte.

One hundred and fifty cars per day of iron shipped from Sunrise and Guernsey to Pueblo.

Vast iron deposits, second to those of no state in the Union, cheaply mined and high in value.

Most famous rendezvous in the world for large game; the hunter's paradise. Has 25,000 wild elk.

Finest hot springs on earth, equal to Carlsbad in mineral properties, located at Thermopolis and Saratoga.

All the mountain ranges contain gold and silver deposits, awaiting the hand of the prospector and the miner.

Sulphur, asbestos and plumbago are among the minerals discovered in quantities considered commercially valuable.

Over one million acres of land now being reclaimed under government and private enterprises. Ask about them.

Grand opportunity for making money in the fattening of lambs upon field peas and alfalfa raised upon Wyoming soil.

The rate of taxation throughout the state has decreased in the aggregate during the past ten years two mills on the dollar.

Natural gas in commercial quantities discovered southwest of Douglas, Converse County, and at Basin and Byron, Big Horn County.

Average interest rate in Wyoming, about eight per cent, indicating good business conditions and a strong demand for money. Gilt-edged security, of course, brings money at a lower rate.

## Why Not Make Wyoming Your State and Home?



## Railroads and Stage Lines.

**D**URING the past year the whole transportation situation in Wyoming has been changed, and even greater changes and improvements must result from the new lines and extensions made necessary by the rapid developments in all lines which improved transportation conditions have made possible in nearly every section of the state.

Tourists passing through Wyoming on the transcontinental railroads see little of the agricultural portion of the state, as the railroads for the most part run on the divides between water courses, while the farming settlements and irrigated lands, as in all semi-arid regions, are in the valleys of the rivers and creeks. The Union Pacific runs across the southern portion of the state for 458.97 miles, connecting at Green River with the Oregon Short Line for Oregon and the Northern Pacific country. The Colorado & Southern has a line running from Cheyenne to Orin Junction, 153.68 miles, connections with the Chicago & Northwestern branch, running from Chadron to Casper, with a trackage of 130.43 miles in Wyoming.

The Wyoming & Northwestern railroad is the extension of the Northwestern system from Casper to Lander, 149 miles, reaching all points in the new Shoshone Reservation country and Central Wyoming.

The Burlington Route has four branch lines entering the state—twenty-nine miles of the Cheyenne and Holdredge line; 236.59 miles of the main line from Lincoln, Neb., to Billings, Mont., running through Newcastle and Sheridan, connecting at Toluca, Mont., with the branch line to Cody, Wyo., a distance of 129 miles (44.61 in Wyoming), and the line from Frannie to Kirby, via Basin and Worland, 114 miles, and by which all points in the Big Horn Basin may be reached; and 41.32 miles of the line from Alliance up the Platte River to Guernsey, Wyo. The Colorado & Wyoming ore road, 14.55 miles long, connects the Colorado & Southern and Burlington roads with the iron mines at Sunrise.

The Laramie, Hahns Peak & Pacific railroad is completed as far as Albany, 40 miles, and connections made there for all camps in the Medicine Bow Range. The fishing grounds of the Little Laramie River and the lakes of the Medicine Bow Range are reached by this route. Sunday excursion trains are run during the summer months.

The Saratoga & Encampment railway is completed from Walcott, on the Union Pacific railroad, to Saratoga, 24 miles, and Encampment, 44 miles. A regular schedule is maintained between these points. Special fishing trains run from Walcott to Saratoga on Saturdays, connecting with Union Pacific trains during the fishing season.

There is a coal road, 6.6 miles of which is in Wyoming, from Belle Fourche, S. D., to Aladdin, and another nineteen miles long from Diamondville to Spring Valley.

Stage lines cover the state thoroughly. Daily stages running from Laramie to North Park, Colo., carry mail and passengers to points on the Big Laramie River.

From Encampment daily stages leave for Battle, twelve miles; Rambler, fourteen miles, and Dillon, nineteen miles; and connections are made for camps south or near the state line and Pearl, Colo., about thirty miles.

Livery teams and saddle horses may be had here for different parts of the district not reached by stage.

For Dillon and Rudefeha, where the Ferris-Haggarty mine is located, connections by team may also be made from Rawlins, the county seat of Carbon County, on the Union Pacific railroad, a distance of fifty-two miles, over a good road.

From Lander stages run to Fort Washakie daily, connecting with other stages for Dubois, Circle and Union, all being points in the Wind River Range and on the road to the Jackson Lake country.

Stages also run from Lander to South Pass City, Atlantic and the New Fork country, connecting at Dallas with another line for Meyersville, Hailey, Rongis and other points in Central Wyoming.

Daily stages are maintained between Shoshoni, on the Wyoming & Northwestern railroad, and Thermopolis, via Birdseye, on Copper Mountain, and between Thermopolis and Kirby, on the Burlington.

The most direct way into the Sunlight country is from Cody, by way of Hart Mountain, Pat O'Hara Creek, Dead Indian Hill and Sunlight Creek, the road having been built up the latter creek as far as the mouth of Galena Creek. From this road trails for pack animals lead up to Sulphur Creek, up Galena Creek, and thence over and around the mountain to the mines in Hughes Basin and Silver Tip Basin, on the west side of Stinking Water Peak.

The new road just constructed by the United States Government from Cody to the National Park, and which, by the way, is one of the finest and most picturesque roads in the West, runs within twenty miles of Silver Tip Basin, with a good road from the mouth of Jones Creek to the Basin. Two hotels have been constructed on this Park route and daily stages run over the new scenic road during the Park season.

Other lines leave Rawlins for Dixon and Baggs and the Snake River, Colorado, country; from Casper to Central Wyoming; Clearmont to Buffalo; Moorcroft to Sundance; Moneta to Lost Cabin; Basin to Burlington, Shell, Hyattville, Bonanza and Ten Sleep; Cody to Meeteetse; Thermopolis to Anchor; connecting with mail routes; Sheridan to interior points in Sheridan and Johnson Counties. Stage lines run from Kemmerer to Big Piney, connecting with interior points.

*THE DEPARTMENT OF IMMIGRATION has  
issued this and other pamphlets on the various re-  
sources of Wyoming, which will be sent free on request to*

*ROBERT P. FULLER,*

*Commissioner of Public Lands,*

*CHEYENNE, WYOMING.*

















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